TOPFIELD®
LEADER OF MULTIMEDIA HOME

Digital Satellite Receiver

Total Media Solution

SRP-2100

User Guide

DVB
Digital Video Broadcasting

Use only with the cart, stand, tripod, bracket, or table specified by the manufacturer or sold with the apparatus. When a cart is used, use caution when moving the cart/apparatus combination to avoid injury from tip-over.

- Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.
- The mains plug, which is used as a disconnect device, shall remain readily operable.

CAUTION
RISK OF ELECTRIC SHOCK
DO NOT OPEN
CAUTION: TO REDUCE THE RISK OF ELECTRIC SHOCK,
DO NOT REMOVE COVER (OR BACK).
NO USER-SERVICEABLE PARTS INSIDE.
REFER SERVICING TO QUALIFIED SERVICE PERSONNEL.

The lightning flash with arrowhead symbol, within an equilateral triangle, is intended to alert the user to the presence of uninsulated "dangerous voltage" within the product's enclosure that may be of sufficient magnitude to constitute a risk of electric shock to a person.

The exclamation point, within an equilateral triangle, is intended to alert the user to the presence of important operating and maintenance (servicing) instructions in the literature accompanying the product.

Contents

Contents iv

1 Introduction 1
- 1.1 Features . . . 2
- 1.2 Controlling the digital receiver . . . 3
  - 1.2.1 The front panel . . . 4
  - 1.2.2 The remote control . . . 5
- 1.3 What is the common interface? . . . 8

2 Setup 10
- 2.1 Unpacking . . . 10
- 2.2 Safety precautions . . . 11
- 2.3 Rear panel connections . . . 13
- 2.4 Connecting up your digital receiver . . . 15
  - 2.4.1 Connecting the antenna . . . 15
  - 2.4.2 Connecting to your television set . . . 16
  - 2.4.3 Connecting to your video cassette recorder . . . 19
- 2.5 Inserting batteries in the remote control . . . 19
- 2.6 Switching on for the first time . . . 20

3 Service Search 21
- 3.1 Searching broadcasting services . . . 21
  - 3.1.1 Configuring LNB settings . . . 22
  - 3.1.2 Configuring DiSEqC 1.2 settings . . . 24
  - 3.1.3 Configuring USALS settings . . . 25

3.1.4 Searching services 27
3.2 Copying services 30
3.3 Editing the transponder list 31
3.4 Resetting to factory settings 32
3.5 Resetting to user settings 32
3.6 Clearing the services list 33

4 Preference Settings **34**
4.1 Language settings 34
4.1.1 Menu language 34
4.1.2 Subtitle language 35
4.1.3 Audio language 35
4.2 Video and audio settings 36
4.2.1 High definition television 36
4.2.2 Colour model 37
4.2.3 Video cassette recorder 37
4.2.4 Television aspect ratio 38
4.2.5 Audio mode 39
4.3 Local time setting 39
4.4 Parental control 42
4.5 Recording Settings 43
4.6 Playback Settings 44
4.7 Adjusting the On-Screen Display 45
4.8 Front Display Settings 46
4.9 To use MediaHighway programme guide 47
4.10 Adjusting a size of picture in picture 47
4.11 Slideshow Settings 47
4.12 Standby mode Setting 48

5 Daily Usage **49**
5.1 Volume control 49
5.2 Watching television 49
5.2.1 The services list 49
5.2.2 The favourite services list 52
5.2.3 Viewing programme information 53
5.2.4 Selecting audio tracks 54

5.2.5 Selecting subtitle tracks . . . 54
5.2.6 Viewing teletext . . . 54
5.3 Viewing electronic programme guide . . . 55
5.4 Watching multifeed programme . . . 55
5.5 Using time shift . . . 56
5.6 Using picture in picture . . . 57

6 Editing Services **59**
6.1 Editing the services list . . . 59
6.2 Editing the favourite list . . . 61
6.3 How to use the on-screen keyboard . . . 63

7 Recording and Playing **64**
7.1 Recording a programme . . . 65
7.1.1 Instant recording . . . 66
7.1.2 Recording Reservation . . . 67
7.1.3 Scheduling recordings using the programme guide . . . 70
7.1.4 Recording a time-shifted programme . . . 70
7.1.5 Recording a pay service programme . . . 71
7.2 File archive . . . 72
7.2.1 To delete a recording . . . 72
7.2.2 To sort recordings . . . 73
7.2.3 To lock a recording . . . 73
7.2.4 To rename a recording . . . 73
7.2.5 To make a new folder . . . 74
7.2.6 To move a recording to another folder . . . 74
7.3 Playing back a recording . . . 74
7.3.1 To navigate using the progress bar . . . 75
7.3.2 To play in slow motion . . . 76
7.3.3 To play in fast motion . . . 76
7.3.4 To make a bookmark . . . 76
7.3.5 To play back a recording repeatedly . . . 77
7.3.6 To play back recordings in sequence . . . 77
7.3.7 To play back a scrambled recording . . . 78
7.4 Editing a recording . . . 78
7.5 Copying a recording . . . 79

7.6 Formatting the hard disk 80

8 Special Features **81**
8.1 Playing back MP3 files 81
8.2 Playing back video files 82
8.3 Viewing graphic files 82
8.4 Copying files 83
8.4.1 To copy a file to an external hard disk drive 83
8.4.2 To copy a file from an external hard disk drive 84
8.5 Playing back contents of YouTube 84
8.6 Sharing image files by Flickr 85
8.7 Weather 87
8.8 Network Game 87
8.8.1 To use the wireless keyboard 87
8.8.2 Battle Tank Single Mode 88
8.8.3 Battle Tank Network Mode 93

9 Accessing to The Digital Receiver via The Internet **94**
9.1 Configuring the router 95
9.1.1 To access within the local area network 95
9.1.2 To access over the Internet 96
9.2 Configuring the network settings on the digital receiver 97
9.3 Accessing the web server 98
9.4 Accessing the FTP server 100

10 Firmware Update **103**
10.1 Checking the firmware information 103
10.2 From a USB memory 104
10.3 From the firmware server via the network 104
10.4 Over the air 106

A Universal Remote Control **107**
A.1 TV codes list 110
A.2 DVD codes list 127
A.3 Audio system codes list 129
A.4 Additional codes list 131

Index 132

Chapter 1

Introduction

Congratulations on buying a SRP - 2100. The SRP - 2100 allows you to view and record digital TV programmes easily.

And the SRP - 2100 digital receiver is fully compliant with the international Digital Video Broadcasting (DVB) standard, and thus able to receive digital broadcasts of that standard.

For its operation you need an antenna which must be installed appropriately.

NOTE

In general, we equate a channel with a frequency. However, unlike analogue broadcasts, digital broadcasts are not all assigned to their own frequencies; instead, multiple television broadcasts are transmitted through a single frequency. The frequency in digital broadcasting is usually called transponder. To reduce confusion in this manual, the word **service** is preferably used than **channel** as a term to indicate one television or radio broadcast.

1.1 Features

The SRP - 2100 has plenty of features as follows:

- Supports DiSEqC 1.0, DiSEqC 1.1, DiSEqC 1.2 and USALS.
- Can store up to 7,000 television and 3,000 radio services.
- You can edit the services list.
- You can create favourite lists of your favourite services.
- You can see information about the current television or radio programme.
- Have electronic programme guides that provide an overview of scheduled programmes.
- You can record one service while you are currently watching another.
- You can record many programmes using a hard disk drive with large storage capacity.
- The time shift is available on the SRP - 2100. You can pause the programme that you are watching and resume it again at a later time. Then you can quickly go to any part of the current programme by fast forward or backward search.
- If you have an external hard disk drive connected to the digital receiver via the USB or eSATA ports, you can record television programmes into it. You can use the external hard disk drive as fast as the built-in hard disk drive with eSATA port.
- You can play back DivX and MP3 files and view image files in JPG format.
- You can play a network game with other players.
- You can play back various contents of the YouTube via the network.

1.2 Controlling the digital receiver

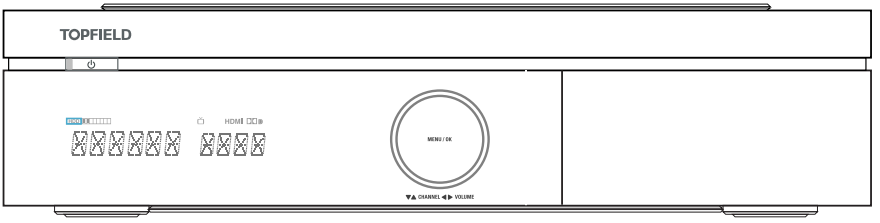
You can operate the digital receiver with the remote control or the buttons on the front panel.

NOTE

When the digital receiver is off but plugged into a wall outlet, we say that it is in standby mode; on the other hand, when it is on, it is in operation mode. Even when you are not using the digital receiver, you should keep it plugged into a wall outlet to be in standby mode so that it can perform timer events at any time.

1.2.1 The front panel

The front panel of the digital receiver has buttons to control the digital receiver, specific lamps and a display to indicate its status. The following indicates what they mean.



⏻ button switches the digital receiver between standby mode and operation mode.

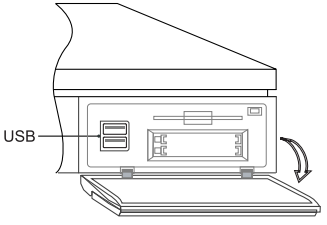
Front display shows the current time in standby mode, and displays the current service in operation mode.

MENU / OK button displays the main menu. It is also used to return to the previous menu from a submenu.

CHANNEL ▼, ▲ buttons switch to previous or next service. They are also used to navigate in menus and interactive screens.

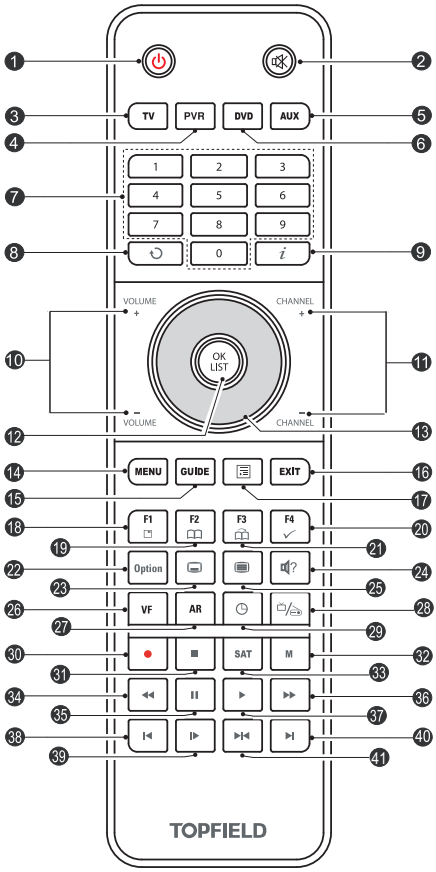
VOLUME ◀, ▶ buttons decrease or increase the volume. They are also used to change values for menu options.

The lamp on the left side of the ⏻ button lights up in red in standby mode when you set the Standby Mode option to Passive. See § 4.12 for more details.



Pull the right edge of the front panel to open the flap. There are USB ports on the front panel to connect to an external hard disk drive or memory stick.

1.2.2 The remote control



① ⏻ button switches the digital receiver between standby mode and operation mode.

② 🔇 mutes the sound. Press again to switch it back on.

③ TV switches the remote control to television mode to operate your television.

④ PVR switches the remote control to receiver mode to operate the digital receiver.

⑤ AUX switches the remote control to operate your audio system.

⑥ DVD switches the remote control to DVD mode to operate your DVD player.

⑦ Numeric buttons are used to enter a service number for service change or to specify values for menu options.

⑧ ↺ switches between the current service and the previously viewed one.

⑨ *i* displays the service information box. It is also used to display more information about a programme.

⑩ VOLUME+, VOLUME− buttons decrease or increase the volume.

⑪ CHANNEL+, CHANNEL− buttons switch to previous or next service.

⑫ OK displays the services list. See § 5.2.1 for more details. It is also used to select a menu item.

⑬ Navigation buttons are used to navigate in menus or to change values for menu options.

⑭ MENU displays the main menu. It is also used to return to the previous menu from a submenu.

⑮ GUIDE displays the electronic programme guide.

⑯ EXIT is used to exit a menu or to hide on-screen info.

⑰ is used to display the list of recorded programmes that are stored on the built-in hard disk drive. See § 7.2 for more details.

⑱ F1 is used to display or hide the sub-picture. See § 5.6 for information about picture-in-picture.

⑲ F2 is used to make a bookmark during playback or time shift.

⑳ F4 is used to edit a recording.

㉑ F3 is used to jump to next bookmark position.

㉒ Option has different functions per menu.

㉓ is used to select a subtitle track.

㉔ is used to select an audio track and a sound mode, or a video track of multifeed programme.

㉕ displays teletext.

㉖ VF changes video resolution. See § 4.2.1 for more details.

㉗ AR changes aspect ratio. See § 4.2.4 for more details.

㉘ switches between television services and radio services.

㉙ [◷] is used to set a sleep timer in 10 minute increments.

㉚ [●] is used to start recording.

㉛ [■] is used to stop playback, to stop recording, or to jump back to live service from time-shifted service.

㉜ [M] switches the output of the TV SCART socket between the digital receiver and the device connected to the VCR SCART socket. See § 4.2.3 for more details.

㉝ [SAT] displays the satellites list with their services list. It is also used to swap the sub-picture with the main picture. See § 5.6 for more details.

㉞ [◂◂] is used to start reverse playback. Subsequent presses increase the rewind speed.

㉟ [II] pauses live television or playback of a recorded programme.

㊱ [▸▸] is used to start fast motion playback. Subsequent presses increase the playback speed.

㊲ [▸] resumes normal playback speed, or displays the progress bar for navigation on playback or time shift. To play a recorded programme, see button 17.

㊳ [|◂] changes the position of sub-picture counterclockwise. It is also used to jump back to beginnng of recording during a playback.

㊴ [▸|] is used to start slow motion playback. Subsequent presses change the playback speed.

㊵ [▸|] changes the position of sub-picture clockwise. It is also used to jump to end of recording during a playback.

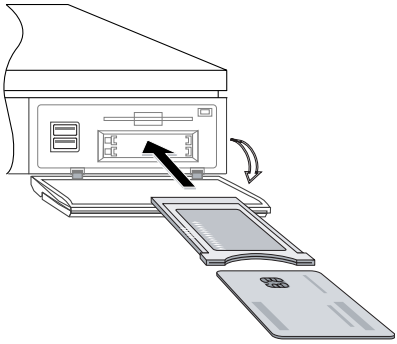
㊶ [▸|◂] is used to specify a block for editing or for repeated playback.

The F1, F2, F3, F4 and Option buttons have additional different functions per menu besides their own function. They will be guided by on-screen help.

NOTE

When using the remote control, point it at the remote sensor on the front panel of the digital receiver.

1.3 What is the common interface?

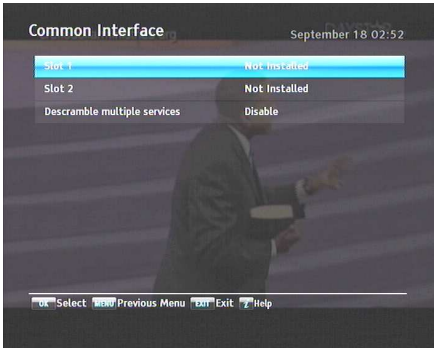


Some broadcasts are scrambled so that only paid subscribers can enjoy them. Scrambled services can only be viewed with a Conditional Access Module (CAM) and a subscription card belonging with the scrambling system.

Common Interface (CI) is the slot on a digitial receiver into which a conditional access module may be inserted. The front of the digital receiver has two common interfaces.

To watch a pay service, you should take the following steps:

1. Purchase a conditional access module and a subscription card for the pay service you want to watch.
2. Insert the subscription card into the conditional access module.
3. Insert the conditional access module into a common interface on the front of the digital receiver.



To view the information about the module and subscription card which is inserted into the digital receiver, select the Information > Common Interface menu.

You should see a screen like the left figure.

NOTE

If you wish to watch two pay services using the picture-in-picture feature, you have to set the Descramble Multiple Services option to Enable, and then install the dedicated CAM which is able to descramble two pay services simultaneously. See § 5.6 for the picture-in-picture feature.

Chapter 2

Setup

2.1 Unpacking

Before going any further, check that you have received the following items with your digital receiver.

- Remote control unit
- Two batteries for the remote control (AAA 1.5 V)
- One HDMI cable
- Wireless keyboard
- A copy of this user guide

NOTE

The wireless keyboard is only for the Battle Tank. See § 8.8.

NOTE

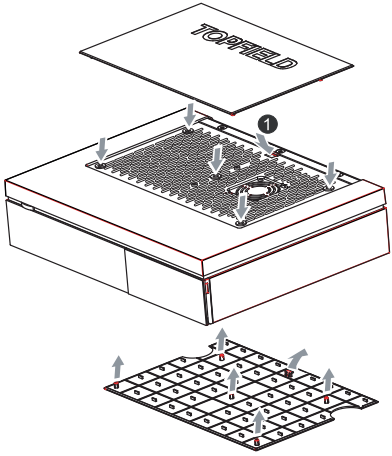
These items may vary according to your local area.

2.2 Safety precautions

Please read carefully the following safety precautions.

- The mains power must be 90 to 250 volts. Check it before connecting the digital receiver to the mains socket. For the power consumption of the digital receiver, refer to Table 2.1.
- The mains outlet should be near the equipment. Do not run an extension lead to the unit.
- Do not expose the digital receiver to any moisture. The digital receiver is designed for use indoors only. Use dry cloth when cleaning the digital receiver.
- Place the digital receiver on a firm and level surface.
- Do not place the digital receiver close to heat emitting units or in direct sunlight, as this will impair cooling. Do not lay any objects such as magazines on the digital receiver. When placed in a cabinet, make sure there is a minimum space of 10 centimetres around it. For the physical specification of the digital receiver, refer to Table 2.2.
- Protect the power cord from being walked on or pinched. If the cord is damaged, stop using the digital receiver and replace the cord.
- Never open the digital receiver casing under any circumstances, the warranty will be void.
- Use only one USB port of the receiver while using a common interface. The receiver may not recognize all the devices because the power supply of the receiver cannot provide enough power for all the devices.
- Refer all servicing to a qualified service technician.

- The top and bottom panel come already assembled. If they become separated, see the following instructions how to reattach.



1. Hook the top panel in the direction shown ❶.
2. Push the top panel down so that it is completely fixed.
3. Turn the digital receiver upside down to attach the bottom panel.
4. Attach the bottom panel in the same way as the top panel.

Table 2.1: Power specifications

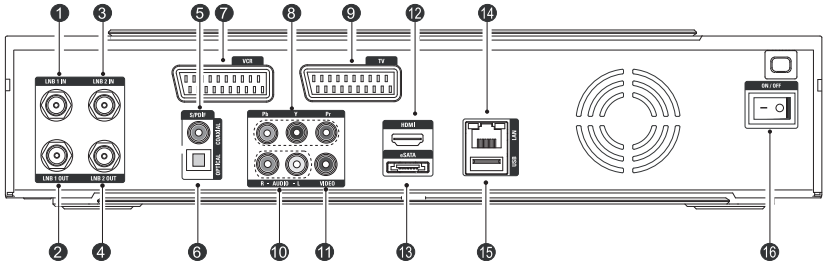
Input voltage	90 to 250 V AC, 50/60 Hz
Power consumption	60 W at maximum in operation
	1 W in passive standby

Table 2.2: Physical specifications

Size	340 × 82 × 258 mm
Weight	3.8 kg
Operating temperature	0 to 45 °C
Storage relative humidity	5 to 90 %

2.3 Rear panel connections

The SRP - 2100 has a wide range of connections on the back.



Check what connections your television set has in comparison with the digital receiver.

① LNB 1 IN Satellite broadcasting signal input socket for the first tuner.

② LNB 1 OUT Satellite broadcasting signal output socket through the first tuner.

③ LNB 2 IN Satellite broadcasting signal input socket for the second tuner.

④ LNB 2 OUT Satellite broadcasting signal output socket through the second tuner.

⑤ S/PDIF COAXIAL Coaxial type of Dolby Digital output socket for the audio system.

⑥ S/PDIF OPTICAL Optical type of Dolby Digital output socket for the audio system.

⑦ VCR Audio and video input/output socket for the video cassette recorder or suchlike.

⑧ Y/Pb/Pr Component video output sockets for the television set. (blue/green/red)

⑨ TV Audio and video output socket for the television set.

⑩ AUDIO L/R	Stereo audio output sockets for the television set or the audio system. (white/red)
⑪ VIDEO	Composite video output socket for the television set. (yellow)
⑫ HDMI	Audio and video output socket for the high definition television set.
⑬ eSATA	eSATA port for connecting to an external hard disk drive.
⑭ LAN	Local area network port. See § 9.2.
⑮ USB	USB port for firmware update and data transfer.
⑯ ON/OFF	Power on/off switch. Before using this digital receiver, you have to turn on the switch first.

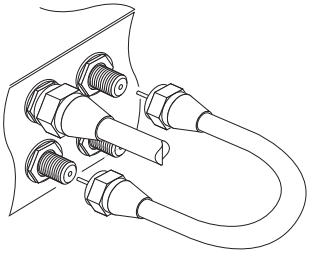
Table 2.3: Connectors specifications

HDMI	High definition video output
	Left & right audio output
	Dolby Digital audio output
TV	CVBS/YUV/RGB video output
	Left & right audio output
VCR	CVBS video output
	Left & right audio output
	CVBS/S-Video/RGB video input for bypass
	Left & right audio input for bypass
YPbPr	Component video (YUV) output
VIDEO	Composite video (CVBS) output
AUDIO	Left & right audio output
S/PDIF	Dolby Digital audio output
LAN	10/100 Ethernet
USB	2.0 Host (5 V DC, 500 mA)
eSATA	External hard disk drive connector

2.4 Connecting up your digital receiver

There are several ways to set up the digital receiver. Set up the digital receiver suitably to your television and other appliances. If you have any problem with your setup or need help, contact your dealer.

2.4.1 Connecting the antenna



Whatever sort of connection you have between the digital receiver and the television, you need to connect the digital receiver to your television antenna so that it can receive digital television services.

Connect the antenna cable to the LNB 1 IN connector on the back panel of the digital receiver.

Also, you must ensure that there is a connection to both the LNB 1 IN and LNB 2 IN connectors on your digital receiver, so that both tuners work properly.

Normally you do that by using a loop cable to link from the LNB 1 OUT connector to the LNB 2 IN connector.

If you have two antennas without DiSEqC switch, then you have to connect a cable from the other antenna directly to the LNB 2 IN connector rather than using the loop cable. If you have another digital receiver, you may link it from the LNB 2 OUT connector.

NOTE

The digital receiver can supply a current of 500 milliampere at maximum for antenna devices including LNB, DiSEqc switch and antenna rotor through each antenna input connection separately but not simultaneously. If there are too many antenna

devices to be supplied with power through antenna input connections simultaneously for a long time, your LNBs may lack power to operate. So it is recommended linking the LNB 1 OUT connector to the LNB 2 IN connector with a loop cable even though the digital receiver is designed to operate over two antennas alternatively.

NOTE

Perhaps you are expecting that the satellite antenna could simultaneously catch all frequencies coming from a satellite and send them to the digital receiver. However, the satellite antenna only sends the frequencies that it can catch with the LNB frequency and polarisation specified by the digital receiver. So if you have linked from the LNB 1 OUT connector to the LNB 2 IN connector, you would have some limitations in using some features such as dual recording. Likewise, if you have another digital receiver linked from the LNB 2 OUT connector, you can only use it limitedly. See § 3.1 for more details.

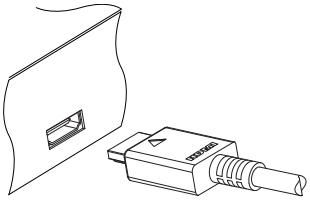
2.4.2 Connecting to your television set

For all the following connections of the digital receiver, we recommend you use the first connector to get the best picture quality. If your television does not have a matching connector, then use the next connector in the following order for a better picture quality.

1. HDMI connector (HDMI)
2. SCART connector (TV)
3. Component connector (YPbPr)
4. Composite connector (VIDEO)

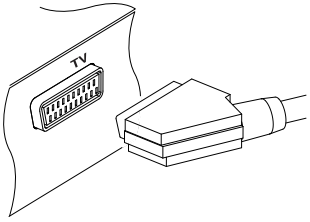
You should configure audio and video settings after connecting up the digital receiver. See § 4.2 for a detailed description.

To use the HDMI connector



If you have a high definition television set, you should use a HDMI cable for the best results. Plug one end of the cable into the HDMI socket on the digital receiver, and plug the other end into the matching socket on your television. In this case, you do not have to make audio connection because the HDMI connector can output stereo audio or Dolby Digital audio.

To use the SCART connector



For the best results with a standard television set, you should use a SCART cable. Plug one end of the cable into the TV socket on the digital receiver, and plug the other end into a free SCART socket on your television.

Some televisions have inputs via S-Video or Component connectors rather than SCART.

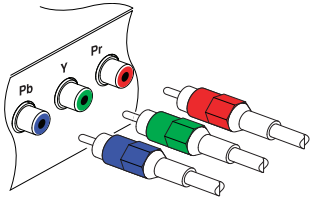
If you have such a television, use an appropriate conversion cable to link the TV socket on the digital receiver to the matching socket on your television.

If you connect with a standard SCART cable, you do not have to make audio connection because the SCART connector can output stereo audio. But if you use a conversion cable, such as SCART-to-Component, you have to make audio connection.

NOTE

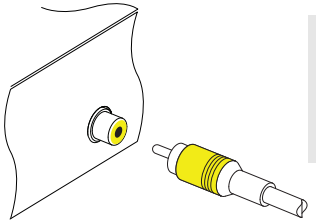
You cannot view high definition video with a SCART connector.

To use the component video connector



You need to obtain a component video cable (RCA cable) to use the component video connector. Plug one ends of the cable into the Y (green), Pb (blue) and Pr (red) sockets on the digital receiver, and plug the other ends into the matching sockets on your television.

To use the composite video connector

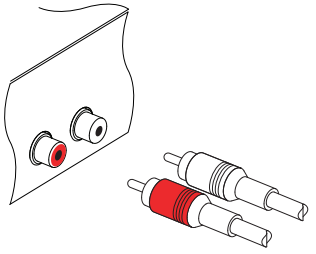


NOTE

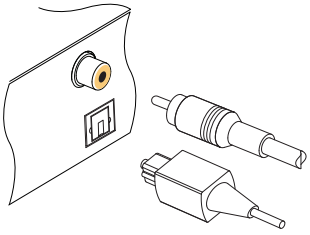
You cannot view high definition video with a composite video connector.

You need to obtain a composite video cable (RCA cable) to use the composite video connector. Plug one end of the cable into the VIDEO (yellow) socket on the digital receiver, and plug the other end into the matching socket on your television.

To make the audio connection



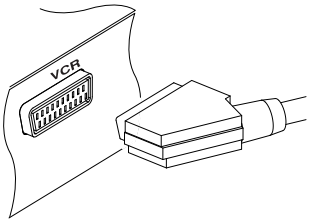
You need to obtain an audio cable (RCA cable) to connect the audio connectors. Plug one end of the cable into the AUDIO L (white) and AUDIO R (red) sockets on the digital receiver, and plug the other end into the matching sockets on your television or audio system.



To enjoy Dolby Digital audio, your television or audio system must be able to decode Dolby Digital audio, and you need to obtain a S/PDIF cable. If you want to use the COAXIAL connector, prepare a coaxial S/PDIF cable (RCA cable); otherwise, to use the OPTICAL connector, prepare an optical S/PDIF cable. Plug one end of the cable into the S/PDIF socket on the digital receiver, and plug the other end into the matching socket on your audio system.

2.4.3 Connecting to your video cassette recorder

The digital receiver can also output video to another appliance such as a video cassette recorder through an auxiliary SCART connector.



You need to obtain a SCART cable to use the auxiliary SCART connector. Plug one end of the cable into the VCR socket on the digital receiver, and plug the other end into the matching socket on your video cassette recorder or suchlike.

2.5 Inserting batteries in the remote control

Open the battery compartment by removing the lid, and then insert the batteries observing the polarity, which is marked on the base of the battery compartment.

If the digital receiver no longer reacts properly to remote control commands, the batteries may be flat. Be sure to remove used batteries. The manufacturer accepts no liability for the damage resulting from leaking batteries.

NOTE

Batteries, including those which contain no heavy metals, may not be disposed with other household wastes. Please dispose of used batteries in an environmentally sound manner. Find out the legal regulations which apply in your area.

2.6 Switching on for the first time

Now that you have your digital receiver connected, you should plug it into a mains socket. Ensure that your television set is turned on and on the correct AV channel, so that you will be able to see the display from the digital receiver.

And press the button on top left corner on the remote control. After about 10 seconds you may see a picture displaying a menu. If you cannot see a picture, try pressing the VF button on the remote control. If after several tries you still get no picture, check that the television is set to the correct input.

If you still cannot see a picture, you may need to temporarily connect the composite video connector (VIDEO) to your television set so that you can see the on-screen menus in order to configure the video settings.

Chapter 3

Service Search

After connecting up your digital receiver, you need to search for the available TV and radio services.

NOTE

If there are no services stored, you will be unable to access some menu options.

3.1 Searching broadcasting services

You can use this digital receiver with both fixed antenna and motorized antenna. When using a antenna, you have to configure antenna settings according to your antenna system in the following order:

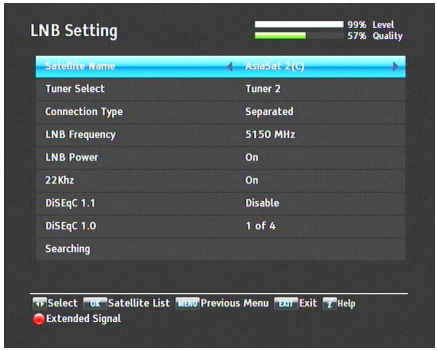
1. Configure LNB settings. (Refer to § 3.1.1.)
2. Set the position of your desired satellites if you have a motorized antenna. You can control the antenna in DiSEqC 1.2 mode or USALS mode. Refer to § 3.1.2 for DiSEqC 1.2, and refer to § 3.1.3 for USALS.
3. Perform a service search.

3.1.1 Configuring LNB settings

There are two large frequency bands for satellite broadcasts. One is C band which ranges approximately from 4 to 6 GHz. The other is K_u band which ranges approximately from 12 to 18 GHz.

The LNB (Low Noise Block converter) is used to take a wide band of relatively high frequencies, amplify and convert them to similar signals that is carried at a much lower frequency, which is called Intermediate Frequency (IF).

High frequencies from satellites are converted into 950 to 2150 MHz by a LNB.



Select the Installation > LNB Setting menu to configure the LNB settings. You should see a screen like the left figure.

Pressing the OK button on the Satellite Name option displays the satellite list in alphabetic order. Select the satellite toward which your antenna is set to face.

You have to specify which tuner is connected to your selected satellite. If it is LNB 1 IN, set the Tuner Select option to Tuner 1; otherwise, set this option to Tuner 2.

If you have connected the LNB 1 OUT and LNB 2 IN with a loop-through cable, then set the Connection Type option to Loop Through; otherwise, set this option to Separated.

NOTE

Both the LNB 1 IN and LNB 2 IN sockets should be connected to your antennas either directly or via the loop-through cable. If you have connected only one socket, some functions such as dual recording may not work.

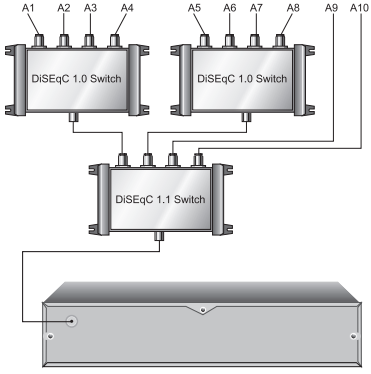
The digital receiver has a database of broadcasting satellites and their transponders, including the following information: satellite position, frequency range, symbol rate, polarization and LNB frequency corresponding to the frequency range. So you might not have to specify the LNB Frequency option. However, if you have selected the Other entry at the Satellite Name option to specify a satellite that is not in the satellite list, you might have to fill in the correct LNB frequency. The absolute difference between a broadcasting frequency and its LNB frequency must be within 950 to 2150 MHz. For example, if the frequency band of your desired satellite ranges from 3660 to 4118 MHz, you have to set the LNB Frequency option to 5150 MHz.

The LNB has to be supplied with electric power to operate. Set the LNB Power option to On if it does not have any other power supply.

If you use a dual LNB or two antennas which is connected to the 22 kHz tone switch box, set the 22 kHz option to ON.

The digital receiver is designed to be compatible with DiSEqC (Digital Satellite Equipment Control) switches. It is possible to connect several antennas to one digital receiver by using DiSEqC switches. A DiSEqC 1.0 switch allows switching up to four satellite sources and a DiSEqc 1.1 switch allows switching up to 16 satellite sources.

Set the DiSEqC 1.0 option and the DiSEqC 1.1 according to your antenna configuration.

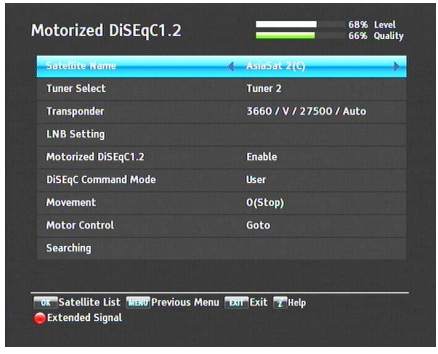


For example, to select the antenna connected to the A5 input in the left figure, set the DiSEqC 1.1 option to 2 of 4 and the DiSEqC 1.0 option to 1 of 4. If you have a mini DiSEqC 1.0 switch which has only two inputs, you should set the DiSEqC 1.0 option to Mini A instead of 1 of 4.

3.1.2 Configuring DiSEqC 1.2 settings

Your motorized antenna will turn toward your desired satellites horizontally by DiSEqC 1.2.

When you switch to an service, if the service is provided by a satellite other than current one, it will take longer time than usual because the antenna has to turn to its position.



To use the DiSEqC 1.2 protocol, select the Installation > Motorized DiSEqC 1.2 menu.

You should see a screen like the left figure.

At first you have to set the Motorized DiSEqC 1.2 option to Enable.

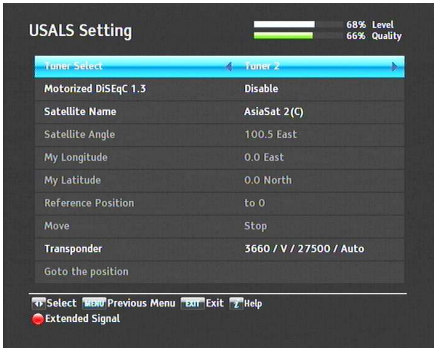
To get the correct position of your desired satellite, perform the following steps:

1. Choose your desired satellite at the Satellite Name option.
2. Select the tuner that is connected to the motorized antenna at the Tuner Select option.
3. Set the DiSEqC Command Mode option to User.
4. Set the Motor Control option to Goto. Then the antenna will turn toward your selected satellite by the position data that the digital receiver has.
5. If the receiving quality, which is displayed at the top right of the screen, is not good, tune the antenna finely with the Movement option. If you set it to 2(E), the antenna will move to the east by two degrees. At this time you had better check the receiving quality of every transponder and choose the best one at the Transponder (or Frequency) option. It will be helpful to your fine tuning.
6. Finally set the Motor Control option to Store to save the tuned position when the receiving quality is the best.

There are more motor control options for installers, but this guide does not describe them. If you are an installer, refer them to the manual of the *STAB* rotor.

3.1.3 Configuring USALS settings

USALS (Universal Satellite Automatic Location System), also known as DiSEqC 1.3, calculates the positions of all available satellites from your location. Compared to DiSEqC 1.2, it is no longer required to manually search and store every satellite position. Just pointing to a known satellite position is enough. This position will act as a central point. The USALS will then calculate positions of visible satellites.



To use the USALS protocol, select the Installation > USALS Setting menu.

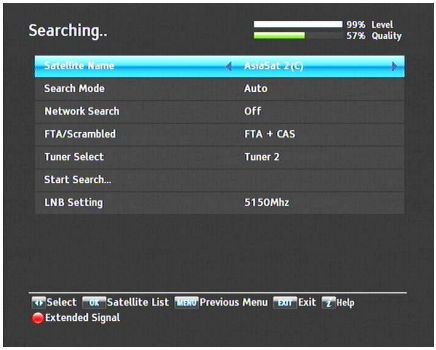
You should see a screen like the left figure.

At first you have to set the Motorized DiSEqC 1.3 option to Enable.

To get every satellite position calculated, perform the following steps:

1. Choose your desired satellite at the Satellite Name option.
2. Select the tuner that is connected to the motorized antenna at the Tuner Select option.
3. Enter your location to the My Longitude option and the My Latitude option with the , and numeric buttons.
4. Enter the position of your selected satellite to the Satellite Angle option if it is not correct.
5. Select the Goto the position option; then the antenna will turn toward your selected satellite as calculating its position.
6. If the receiving quality, which is displayed at the top right of the screen, is not good, then tune the antenna finely with the Move option. The changed position is automatically saved. At this time you had better check the receiving quality of every transponder and choose the best one at the Transponder (or Frequency) option. It will be helpful to your fine tuning.

3.1.4 Searching services



To perform service search, select the Installation > Searching menu.

You should see a screen like the left figure.

There are four service search methods:

- Searching every service of a satellite.
- Searching every service of a transponder.
- Searching one service of a transponder.
- Searching every service of a SMATV (Satellite Master Antenna Television) system.

Searching every service of a satellite

To search every service of a satellite, perform the following steps:

1. Choose your desired satellite at the Satellite Name option.
2. Set the Search Mode option to Auto.
3. If you set the Network Search option to On, the digital receiver will check up the up-to-date channel information as searching services, but it takes rather longer time.

Searching every service of a transponder

To search every service of a transponder, perform the following steps:

1. Choose your desired satellite at the Satellite Name option.
2. Set the Search Mode option to Manual... and press the OK button.
3. Choose your desired transponder at the Frequency option or enter it with the numeric buttons.
4. Enter the symbol rate of your desired transponder to the Symbol Rate option with the numeric buttons.
5. Set the Polarization option to the polarization of your desired transponder.
6. Set the Modulation option to the modulation type of your desired transponder. If your desired transponder has high definition broadcasts, you should set this option to DVB-S2 QPSK or DVB-S2 8PSK. Then the FEC option and the Pilot option will become enabled. You should also set these options correctly.
7. If you set all options correctly, press the MENU button to save the settings.
8. If you set the Network Search option to On, the digital receiver will check up the up-to-date channel information as searching services, but it takes rather longer time.

NOTE

You may get transponder information from a satellite magazine or web site such as http://www.satcodx.com or http://www.lyngsat.com.

Searching one service of a transponder

To search one service of a transponder, perform the following steps:

1. Choose your desired satellite at the Satellite Name option.

2. Set the Search Mode option to Advanced... and press the OK button.
3. Choose your desired transponder at the Frequency option or enter it with the numeric buttons.
4. Enter the symbol rate of your desired transponder to the Symbol Rate option with the numeric buttons.
5. Set the Polarization option to the polarization of your desired transponder.
6. Set the Modulation option to the modulation type of your desired transponder. If your desired transponder has high definition broadcasts, you should set this option to DVB-S2 QPSK or DVB-S2 8PSK. Then the FEC option and the Pilot option will become enabled. You should also set these options correctly.
7. Specify the packet identifiers of your desired service at the PID option with the numeric buttons. A packet identifier is used to verify audio and video streams.
8. If you set all options correctly, press the MENU button to save the settings.

Searching every service of SMATV system

To search every service of a SMATV system, if the digital receiver is connected to it, perform the following steps:

1. Choose your desired satellite at the Satellite Name option.
2. Set the Search Mode option to SMATV... and press the OK button.
3. Choose your desired transponder at the Frequency option or enter it with the numeric buttons.
4. Enter the symbol rate of your desired transponder to the Symbol Rate option with the numeric buttons.

5. If you set all options correctly, press the MENU button to save the settings.

You can search pay services as well as free services as follows:

- To search only free services, set the FTA/Scrambled option to FTA only.
- To search only pay services, set it to CAS only.
- To search both free services and pay services, set it to FTA + CAS.

To start service search, select the Start Search item; then a list box appears, in which found services will be listed. When it has completed, press the OK button to save found services. To stop at any time or to exit without saving, press the EXIT button.

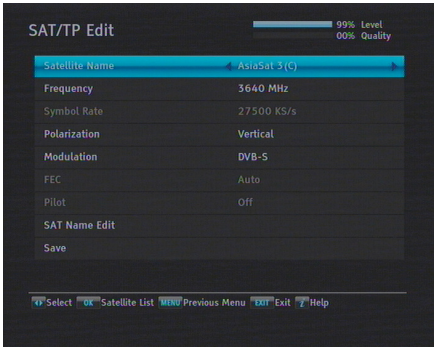
3.2 Copying services

The digital receiver maintains a separate services list with each tuner. If a certain service is registered on only one tuner, it may be unable to watch one service while recording. You can copy one tuner's services list to the other tuner to avoid such an inconvenience.

To copy the services list, select the Installation > Services Copy menu. There are three copy options as follows:

- To copy the first tuner's services list to the second tuner, select the Tuner 1 to Tuner 2 option.
- To copy the second tuner's services list to the first tuner, select the Tuner 2 to Tuner 1 option.
- To copy reciprocally, select the ALL option.

3.3 Editing the transponder list



You can change satellite information.

Select the Installation > SAT/TP Edit menu. You should see a screen like the left figure.

To change the information of a satellite entry, perform the following steps:

1. Choose your desired satellite at the Satellite Name option.
2. Choose your desired transponder at the Frequency option or enter it with the numeric buttons.
3. Change the Polarization option to the polarization of your desired transponder.
4. Change the Modulation option to the modulation type of your desired transponder. If your desired transponder has high definition broadcasts, you should set this option to DVB-S2 QPSK or DVB-S2 8PSK. Then the FEC option and the Pilot option will become enabled. You should also set these options correctly.
5. To change a satellite entry's name, select your desired entry at the Satellite Name option and select the SAT Name Edit option. Then the on-screen keyboard appears. Change the name and save it.

   See § 6.3 for how to use the on-screen keyboard.

6. Select the Save option and press the OK button to save the changes. To stop at any time or to exit without saving, press the EXIT button.

3.4 Resetting to factory settings

The digital receiver maintains the following data:

- Satellite list
- Services list
- Favourite list
- Timer list
- Preference settings

You can reset all data of the digital receiver. To do that, select the Installation > System Recovery > Factory Setting menu, and then you get asked for confirmation. If you select Yes, service entries, favourite entries and timer events will all be deleted, and preference options will be reset to the manufacturer's factory settings.

NOTE

The factory reset does not delete any recorded programmes.

NOTE

After performing the factory reset, you have to search services again.

3.5 Resetting to user settings

You can store your own data including the following:

- Satellite list
- Services list

- Favourite lists
- Preference settings

Also you can restore them at any time.

To store your data, select the Installation > System Recovery > Store System Data menu; then you get asked for confirmation. If you select Yes, your data will be stored. Whenever you store your data, they are all overwritten.

To restore your data, select the Installation > System Recovery > Recover System Data menu; then you get asked for confirmation. If you select Yes, your data will be restored.

You can also store your data to an external hard disk drive.

To store your data to an external hard disk drive, select the Installation > System Recovery > Export System Data menu; then you get asked for confirmation. If you select Yes, your data will be stored.

To restore your data from an external hard disk drive, select the Installation > System Recovery > Import System Data menu; then system data will be listed. Select a data and press the OK button, then your data will be restored.

3.6 Clearing the services list

If you want to delete all services, select Installation > System Recovery > Reset Service List; then you get asked for confirmation. If you select Yes, the services list will be cleared.

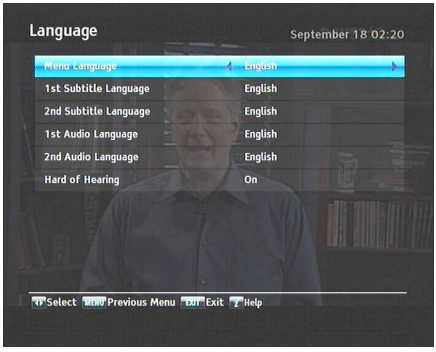
NOTE

After performing the service list reset, you have to search services again.

Chapter 4

Preference Settings

4.1 Language settings



You can select the language in which the menu would be displayed. In addition to that, you can select the language of audio track and of subtitle track.

Select the Settings > Language menu. You should see a screen like the left figure.

4.1.1 Menu language

Set the Menu Language option to your desired language. Once you select a language, the menu will be immediately displayed in the selected language.

4.1.2 Subtitle language

Set the 1st Subtitle Language option and the 2nd Subtitle Language option to your desired languages. When you watch a programme, if the programme has a subtitle track of the language that is designated for the 1st Subtitle Language, it will be displayed. If the first language is not available but the second language is available, the subtitle of the second language will be displayed. If there is no available language, no subtitle will be displayed.

Apart from this setting, you can select a subtitle track with the [⊟] button. See § 5.2.5 for a detailed description.

Some broadcaster may send a subtitle track dedicated to persons who have difficulty in hearing. Even when one or more subtitle tracks are available, that subtitle track will be displayed prior to those you have designated for the 1st Subtitle Language and the 2nd Subtitle Language options if the Hard of hearing option is set to On.

4.1.3 Audio language

Set the 1st Audio Language option and the 2nd Audio Language option to your desired languages. When you watch a programme, if the programme has an audio track of the language that is designated for the 1st Audio Language, it will be outputted. If the first language is not available but the second language is, the audio of the second language will be outputted.

Apart from this setting, you can select an audio track with the [🔊?] button. See § 5.2.4 for a detailed description.

4.2 Video and audio settings

You have to configure the video and audio settings appropriately for your television set and other appliances.

Select the Settings > A/V Output menu. You should see a screen like the left figure.

4.2.1 High definition television

The digital receiver supports various video resolutions from 576 to 1080. In general a resolution of 720 or more is considered high definition. The higher the resolution, the better the quality. However, if your television set does not support high definition, you cannot enjoy high definition quality picture.

Set the Video Format option as you desire.

If you set this option to 576P, the digital receiver will present even high definition programmes in resolution of 576. On the contrary, if you set it to 1080I, the digital receiver will present even standard definition programmes in resolution of 1080.

It is recommended setting it to Auto if you have a high definition television. With that setting the digital receiver will present a programme as it is without any resolution conversion. While watching television you can change the resolution with the VF button. Whenever you press it, the video resolution will be changed in turn.

If you have the digital receiver linked to your television by the component video connectors (Y, Pb and Pr), set the HD Output option to Component. Otherwise if you have connected

it to your television by the SCART connector, set this option to Scart.

NOTE

You can enjoy only standard definition video with the following connectors:

- Composite video connector (VIDEO)
- SCART connector (TV)

4.2.2 Colour model

Through the TV SCART connector, the digital receiver is able to output video in various colour models.

If you have the digital receiver linked to your television by this connector, you should set the SCART Output option to your desired colour model.

If you have connected via the RCA connector labeled VIDEO on the back panel, you do not have to set this option because the digital receiver outputs CVBS video through the RCA connector independently of the SCART connector.

However, if you have connected via the S-VIDEO connector, you have to set this option to S-Video because the output through S-Video connector comes from the SCART interface.

4.2.3 Video cassette recorder

You can have the digital receiver linked to your video cassette recorder or such an appliance by the VCR SCART connector. In this case, the digital receiver will operate differently depending on the setting of the VCR Scart Type option. If the option is set to Standard, the digital receiver will pass the video from the video cassette recorder to your television when it starts playback. But if the option is set to External A/V, the digital receiver will not pass the video automatically.

NOTE

It is impossible for the digital receiver to record the video that the video recorder plays back. Because the digital receiver is just a bypass for the video recorder.

4.2.4 Television aspect ratio

If you have a wide-screen television, set the TV Aspect Ratio option to 16:9.

You can enjoy both wide-screen programmes and normal-screen programmes with your wide-screen television as the above figures show. To watch normal-screen programmes in full screen like the left figure, set the Display Format option to Full. Normal-screen pictures then will be inflated to fit to the width of the wide screen. Otherwise, to watch them in the original ratio like the right figure, set it to Center.

Otherwise, if you have a normal-screen television, set the TV Aspect Ratio option to 4:3.

You cannot fully enjoy wide-screen programmes with your normal-screen television as the above figures show. The left figure shows a normal picture displayed in the normal screen. To watch wide-screen programmes in the shape like the centre figure, set the Display Format option to Letter Box. Wide-screen pictures then will be reduced to fit to the width of the normal screen. Otherwise, to watch them in the shape like the right figure, set it to Center extract. Then wide-screen pictures will be cut out on the left and right sides equally to fit to the width of the normal screen.

4.2.5 Audio mode

Basically, there are two audio sources as you can find two audio sockets on the back panel of the digital receiver. You can enjoy only one source or both of them in either stereo or mono. Set the Sound Mode option as you desire.

Apart from this setting, you can change the sound mode with the [?] button. See § 5.2.4 for a detailed description.

The digital receiver can output two types of digital audio signals via the S/PDIF connector. One is an encoded signal, and the other is a decoded signal. If your digital audio system does not have a Dolby Digital decoder, you have to set the Dolby Digital option to Off. Otherwise, set it to On.

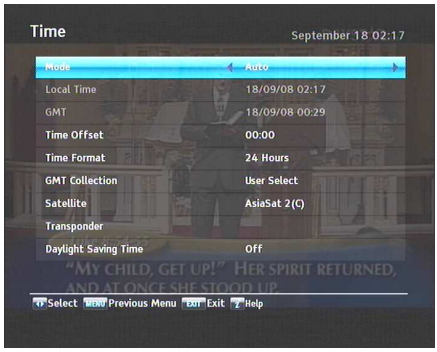
NOTE

If the service you are currently watching does not provide Dolby Digital, you cannot watch the programme with Dolby Digital sound even though you set the Dolby Digital option to On.

4.3 Local time setting

You should set your local time for timer events.

If you do not set the local time correctly, the programme time table provided by the programme guide may be distrustful. For the programme guide, refer to § 5.3.



Select the Settings > Time menu. You should see a screen like the left figure.

You can set the clock manually or use the time signal, Greenwich Mean Time (GMT), carried as part of the digital television broadcast.

To use Greenwich Mean Time, take the following steps:

1. Set the Mode option to Auto; then the Time Offset option becomes enabled.
2. Set the Time Offset option to the time difference between your time zone and GMT referring to Table 4.1.
3. To get Greenwich mean time, set the GMT Collection option to one among the following:

   Normal from all transponders

   CAS Only from transponders of pay services

   User Select from transponders specified by user

   If you set it to User Select, then the Satellite option and the Transponder option become enabled. Select your desired satellite and transponders at those options. With the above settings, the digital receiver will scan all specified transponders one by one until to get the Greenwich Mean Time.
4. Make sure that your local time is correctly displayed on the Local Time option.

Table 4.1: Time offset table

Time offset	City
GMT − 12:00	Eniwetok, Kwajalein
GMT − 11:00	Midway Island, Samoa
GMT − 10:00	Hawaii
GMT − 09:00	Alaska
GMT − 08:00	Pacific Time US, Canada
GMT − 07:00	Mountain Time US, Canada
GMT − 06:00	Central Time US, Canada, Mexico City
GMT − 05:00	Eastern Time US, Canada, Bogota, Lima
GMT − 04:00	Atlantic Time Canada, La Paz
GMT − 03:30	Newfoundland
GMT − 03:00	Brazil, Georgetown, Buenos Aries
GMT − 02:00	Mid-Atlantic
GMT − 01:00	Azores, Cape Verde Islands
GMT	London, Lisbon, Casablanca
GMT + 1:00	Paris, Brussels, Copenhagen, Madrid
GMT + 2:00	South Africa, Kaliningrad
GMT + 3:00	Baghdad, Riyadh, Moscow, St. Petersburg
GMT + 3:30	Tehran
GMT + 4:00	Abu Dhabi, Muscat, Baku, Tbilisi
GMT + 4:30	Kabul
GMT + 5:00	Ekaterinburg, Islamabad, Karachi, Tashkent
GMT + 5:30	Bombay, Calcutta, Madras, New Delhi
GMT + 6:00	Almaty, Dhaka, Colombo
GMT + 7:00	Bangkok, Hanoi, Jakarta
GMT + 8:00	Beijing, Perth, Singapore, Hong Kong
GMT + 9:00	Tokyo, Seoul, Osaka, Sapporo, Yakutsk
GMT + 9:30	Adelaide, Darwin
GMT + 10:00	Eastern Australia, Guam, Vladivostok
GMT + 11:00	Magadan, Solomon Islands, New Caledonia
GMT + 12:00	Fiji, Auckland, Wellington, Kamchatka

To set the local time manually, set the Mode option to Manual and enter your local time to the Local Time option with the numeric buttons. The time format is *day/month/year 24-hour:minute*.

To change the time format to 12-hour format, set the Time Format option to 12 Hour.

If daylight saving time is observed in your area at the moment, set the Daylight Saving Time option to On.

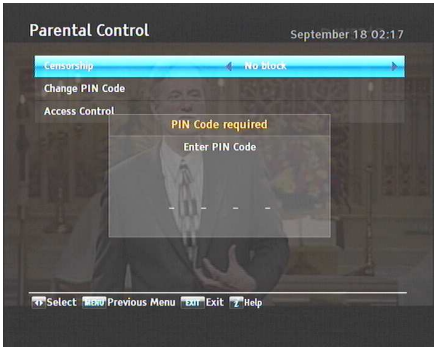
NOTE

Daylight saving time adds one hour to the time when the option is set to On. When setting the time offset from Greenwich Mean Time, make sure that time offset does not include daylight saving time.

4.4 Parental control

In general, television programmes are classified according to the level of violence, nudity and language of their contents. When you are watching a programme, you can check its programme classification on the information box. For the information box, see § 5.2.3.

You can prevent your children from watching specific programmes by specifying a programme classification.



Select the Settings > Parental Control menu. You should see a screen like the left figure, and you will be asked your Personal Identification Number (PIN).

The number is initially set to '0000' as a default.

If you wish to block 15 or above rated programmes, set the Censorship option to 15 (age). Setting it to No block blocks no programme; on the other hand, setting it to Total block blocks every programme.

NOTE

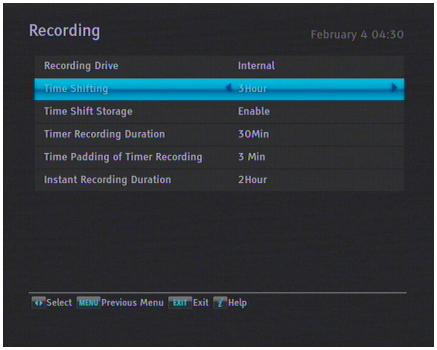
If a programme does not have any programme classification information, your censorship setting will not take effect.

If anyone is trying to watch a programme that is of or above the censorship setting, the person has to enter the personal identification number to override.

To change the number, select the Change PIN Code menu; then an input box appears. You have to enter a desired number twice for confirmation.

You can also restrict uses of some menus. Selecting the Access Control menu displays a list of menus that you can lock. If the Time item is set to Locked, you have to enter the personal identification number when accessing the Time menu. If you enter a wrong number, you cannot use the menu. To release the item, set it to Unlocked.

4.5 Recording Settings



To configure the recording related settings, select the Settings > Recording menu.

You should see a screen like the left figure.

You can record a programme into both an external or the built-in hard disk drive. If you want to record a programme into an external hard disk drive, set Recording Drive option to External; otherwise, set this option to Internal.

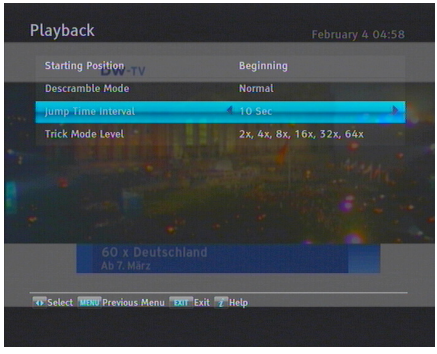
You can adjust the duration of the time shift. Set the Time Shifting option as you desire. Its available range is 30 minutes to 5 hours. If you do not want to use the time shift, set this option to Disable.

If you set the Time Shift Storage option to Enable, the saving parts which for the time shift will be recorded in the TimeShift folder of the hard disk drive.

You can set the duration of the timer recording. Set the Timer Recording Duration option as you desire. Its available range is 10 minutes to 3 hours. In addition, you can adjust the time padding of timer recording. Set the Time Padding of Timer Recording option as you desire. Its available range is 0 to 30 minutes.

You can adjust the duration of the instant recording. Set the Instant Recording Duration option as you desire. Its available range is 30 minutes to 5 hours.

4.6 Playback Settings



To configure the playback related settings, select the Settings > Playback menu.

You should see a screen like the left figure.

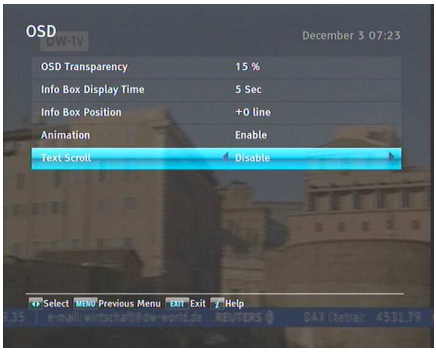
If you want to play back a recorded file from beginning, set Starting Position option to Beginning. To play back a recorded file from the part where you were watching, set this option to Continuing.

To record again a scrambled recording file with descrambling during playback, set the Descramble Mode option to Auto Recording; otherwise, set this option to Normal.

You can adjust the jump time interval which is used in playback. Set the Jump Time Interval option as you desire. Its available range is 10 seconds to 3 minutes.

If you want to use extensional trick mode, set the Trick Mode Level option to 2x, 4x, 8x, 16x, 32x, 64x; otherwise, set this option to 4x, 16x, 64x.

4.7 Adjusting the On-Screen Display



To adjust the On-Screen Display (OSD) related settings, select the Settings > OSD menu.

You should see a screen like the left figure.

To adjust the transparency level of the OSD, set the OSD Transparency option as you desire. Its available range is 0 to 50 percent.

To adjust the display time of the information box, set the Info Box Display Time option as you desire. Its available range is 1 to 30 seconds. If you set this option to No Infobox, the information box will not be displayed when you switch services. However, pressing the [i] button will display the information box. If you set this option to Never Hide, the information box will always be displayed. For the information box, see § 5.2.3.

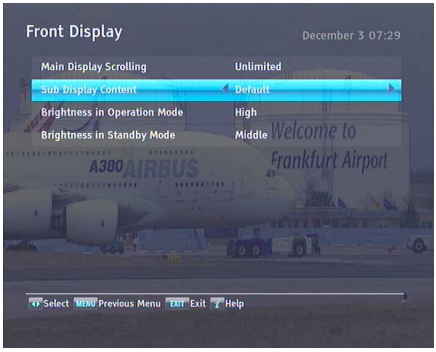
In addition, you can raise or lower the position of the information box. To do that, set the Info Box Position option as you

desire. Its available range is -10 to $+3$ lines. The higher you set the option, the lower the information box will be positioned.

To use an animation effect when changing menu, set the Animation option to Enable.

To use the service name scrolling at the service list screen, set the Text Scroll option to Full Scroll or Part Scroll. If you set this option to Full Scroll, a service name will be fully scrolled. If you set this option to Part Scroll, a service name will be scrolled only from beginning of the name to end of the name.

4.8 Front Display Settings



To adjust the front display related settings, select the Settings > Front Display menu.

You should see a screen like the left figure.

If you want to use the front display scrolling continuously, set the Main Display Scrolling option to Unlimited. Setting it to Once do the scrolling one time. Set it to Disable not to use the scrolling.

To display the current time on the sub display of the front display, set the Sub Display Content option to Time. Otherwise, set this option to Default to display the name of the upper menu.

To adjust the brightness of the front display in operation mode, set the Brightness in Operation Mode option as you desire.

You can also adjust the brightness of the front display in standby mode. To do that, set the Brightness in Standby Mode option as you desire.

4.9 To use MediaHighway programme guide

Almost every service provider would provide the electronic programme guide. However, you can get more abundant programme information from the specific transponder that provides only programme guides. For detailed description about the electronic programme guide, see § 5.3. MediaHighway stands for the transponder dedicated to the electronic programme guide.

If you want to use this feature, select the Settings > MediaHighway EPG menu.

Set the MediaHighway EPG option to On to activate this feature; then the other options become enabled. Set the Satellite Name and Home Transponder options to available ones, and set the Tuner Select option to a tuner which receives them.

4.10 Adjusting a size of picture in picture

You can adjust a size of picture-in-picture screen. To do that, select the Settings > Others menu; then, set the Default PIP Size option as you desire. For the picture-in-picture, see § 5.6.

4.11 Slideshow Settings

You can change a time interval and effect of slideshow in the photo album. For the photo album, see § 8.3.

To change the time interval of slideshow, select the Settings > Others menu; then, set the Slideshow Time Interval option as you desire. Its available range is 3 to 10 seconds.

To change the effect of slideshow, select the Settings > Others menu; then, set the Slideshow Effect option as you desire. There are four types of effects as follows:

Overlap overlaps the current picture and a following picture.

Cover covers the current picture with a following picture.

Move moves the current picture and displays a following picture.

Mosaic displays a following picture with a mosaic effect.

To use those effects ramdomly, set this option to Random. The default value is Random.

4.12 Standby mode Setting

You can display the current time on the front display in standby mode. To display the time, select the Settings > Others menu and set the Standby Mode option to Active; otherwise, set it to Passive. When you set the Standby Mode option to Active, the receiver can also bypass the signal from the antenna.

Chapter 5

Daily Usage

5.1 Volume control

Use the VOLUME+ and VOLUME− buttons to alter the volume to a comfortable level. You may need to adjust the volume on your television set too. To temporarily switch off the sound, press the button. Press it again to restore the sound to previous level.

5.2 Watching television

To change services, press the CHANNEL+ or CHANNEL− button. Pressing the button switches to the previously viewed service. In addition, you can switch to your desired service by entering its service number with the numeric buttons. You can also select a service to watch in the services list.

5.2.1 The services list

To display the services list, press the OK button.

On the services list, you can see the service information:

- Service number and name
- Transmitting satellite
- Receiving tuner: T1 stands for the first tuner; T2 stands for the second tuner.
- Transponder information

A dollar sign (**$**) marked on some entries indicates pay service. To watch pay services, you need a subscription card.

To select a desired service, put the highlight bar on its entry with the ◉ or ◉ button and press the OK button; then it will be displayed.

Pressing the ◉ or ◉ button skips over 10 entries up or down. Entering a service number with the numeric buttons puts the highlight bar on its entry.

You can switch between the television services list and the radio services list by pressing the button.

Pressing the F3 button performs an alphabetic browse. For instance, when the highlight bar is on an entry of which initial is B, pressing the F3 button puts the highlight bar on the first entry of which initial is C.

To display favourite lists, press the F2 button.

Pressing the Option button displays the additional options, with which you can do the following:

- Select your desired satellite at the Satellite option, then only provided services by the selected satellite will be listed.

- Select your desired tuner at the Tuner option, then only provided services through the selected tuner will be listed.
- By setting the Show Provider option to On, you can view service entries by groups of broadcasters.
- To change the name of the highlighted service, select the Rename option; then the on-screen keyboard appears, with which you can enter a new name. See § 6.3 for how to use the on-screen keyboard.
- You can prevent other family members from watching the highlighted service by setting the Lock option to Locked. You have to enter your personal identification number to watch or unlock it.
- To delete the highlighted service, select the Delete option; then you get asked for confirmation. If you select Yes, it will be deleted. If you want to restore it as before, you have to perform service search again. See § 3.1 for service search.
- To add the highlighted service into a favourite group, select the Add to Fav option; then the favourite groups will be displayed. Put the highlight bar on a desired group and press the OK button.
- You can additionally sort the services list with the Sorting option as follows:

  Default by service number
  Alphabetic by service name
  Satellite by satellite
  FTA–CAS from free services to pay services
  CAS–FTA from pay services to free services
  Provider by broadcaster
  Fav–NoFav from favourite services to unfavourite services.

Transponder by transponder.

5.2.2 The favourite services list

You can select a service on a favourite list as well as on the services list.

To display the favourite lists, press the F2 button at the services list screen. For the services list, see § 5.2.1.

To select a favourite list, put the highlight bar on a desired favourite group list and press the OK button; then favourite services belonging to the highlighted group are listed.

For how to edit the favourite lists, refer to § 6.2.

To select a favourite service, put the hightlight bar on a desired service and press the OK button. Once you select a desired service with the OK button, it will be displayed. To select other group, press the ↻ button.

After you have selected a favourite service, if you then switch to another service using the ◎ or ◎ button, it will be also another favourite service of the selected group. The digital receiver will remind you what group you have selected by displaying its name at the top right of the screen whenever you switch services.

To return to the services list, press the F1 button.

Besides that, you can add or delete a favourite group or service.

To add the service you are currently watching into a favourite group, press the Option on the favourite group list. Then, select Add this service item and press the OK button.

To delete a service, press the Option on the favourite group list. Then, select Delete item and press the OK button; then you get asked for confirmation. If you select Yes, it will be deleted.

5.2.3 Viewing programme information

Pressing the i button displays the information box, on which you can see all of the following:

- Service number and name
- Transmitting satellite
- Receiving tuner
- Transponder information
- Signal level and quality
- Programme name
- Programme classification symbol
- Programme summary
- Broadcasting time
- Current time

In addition, you might see the following symbols:

- Subtitle symbol ( ) if subtitle tracks are provided on the current programme.
- Teletext symbol ( ) if teletext pages are provided on the current service.
- Dolby symbol (D) if a Dolby audio track is provided on the current programme.
- Lock symbol ( ) if the current service is locked.
- Dollar symbol ($) if the current service is a pay service.
- Multifeed symbol ( ) if the current programme is provided as a multifeed programme. To use this feature, refer to § 5.4.

If the electronic programme guide is provided on the current service, you can see the information about the current and next

programmes with the or button. You can also see the information about other services with the or . In this case, you can change a service by pressing the OK button.

Pressing the *i* button once more displays detailed information about the current programme. To hide the information box, press the EXIT button.

5.2.4 Selecting audio tracks

Some programmes are provided with audio tracks in one or more languages. Pressing the button displays available audio tracks. Once you select an audio track, that track will be heard. In addition, you can enjoy audio tracks in four sound modes: Stereo, Mono, Left or Right. However, if a multifeed programme is provided at the moment, video tracks will be displayed. In this case, you have to press the button once more to select an audio track.

5.2.5 Selecting subtitle tracks

Some programmes are provided with subtitle tracks in one or more languages. If the current programme provides subtitle tracks, the subtitle symbol ( ) will be marked on the information box. Pressing the button displays available subtitle tracks. Once you select a subtitle track, it will be displayed.

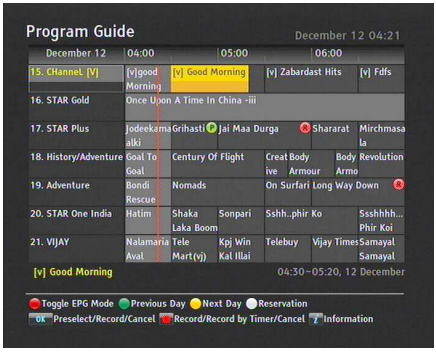
5.2.6 Viewing teletext

On some services, such information as weather reports, news or stock quotations is provided by means of teletext. If the current service provides teletext, the teletext symbol ( ) will be displayed on the information box. Press the button to view teletext pages.

Select a page to view by entering its page number with the numeric buttons. You can zoom into a teletext page with the F3 button, and adjust its transparency level with the F4 button. To clear the teletext screen, press the EXIT button.

5.3 Viewing electronic programme guide

The Electronic Programme Guide (EPG) shows the current and scheduled programmes that are or will be available on each service with a short summary for each programme.



Selecting the Recording > Program Guide or pressing the GUIDE button displays the electronic programme guide, on which you can see the following:

- Scheduled programmes
- programme summary
- Broadcasting date
- Broadcasting time

To see detailed information of a desired programme, put the highlight bar on the programme with the navigation buttons and press the *i* button.

You can travel over previous days with the F2 button, and can travel over next days with the F3 button.

To see the programme guide for radio broadcasts, press the button. To switch it back, press the button again.

Pressing the F1 button displays the programme guide in the different form. To switch it back, press the F1 button again.

You can make a timer recording on the electronic programme guide. See § 7.1.3 for detailed description.

5.4 Watching multifeed programme

Some broadcasts such as sports channels can provide a variety of perspectives on a programme at the same time. We call it a multifeed programme. You can select and watch a perspective you prefer.

If a multifeed programme is provided on the current service, the multifeed symbol ( ) will be marked on the information box. Press the [?] button, then available video tracks will be listed. Once you select one, it will be displayed. At this time, you have to press the [?] button once more to select audio tracks.

5.5 Using time shift

You can pause and resume a live television programme, and even rewind and replay it. When you are watching a programme and you miss something, you can rewind and replay it. Or when your attention is needed elsewhere, you can pause live TV and resume a short time later without losing any of the programme.

When you do this, you are no longer watching the live programme, instead you are watching a delayed presentation. This is called time shifted television. You can skip commercials until you catch up to the live broadcast.

In order to use the time shift feature, set the Time Shifting option to desired duration of time. Then the digital receiver will keep as much time as you set in the option. See § 4.5.

The time shift will reset each time you change to another service.

With the time shift, the following operations are possible:

- To go back in time, hold down the [◂◂] button; to go forward, hold down the [▸▸] button. The progress bar is displayed momentarily with a preview window.

- You can navigate using the progress bar, refer to § 7.3.1.
- You can jump backward and forward by pressing the F4 and F3 buttons. You can change the jump time at the Jump Time Interval option. See § 4.6.
- You can change playback speed. See § 7.3.2 for slow motion. For fast motion, see § 7.3.3.
- To check your current position in time shift, press the *i* button. The time difference compared to live programme is displayed momentarily in top right corner of screen. A value of −02:00 means two minutes behind live programme.
- To make a recording of what is in time shift, see § 7.1.4.
- To end time shift, press the ■ button. The live programme will be displayed.

NOTE

You can adjust some options of the time shift. Refer to § 4.5.

5.6 Using picture in picture

You can watch two services at the same time with one of them displayed in a sub-picture. We call this feature picture-in-picture.

The instructions on how to use the picture-in-picture feature are as follows:

1. Press the F1 button to display a sub-picture, on which another service will be displayed. Pressing the F1 button once more hides the sub-picture.

2. To display the services list for the sub-picture, press the Option button.

   NOTE
   When a recording is in progress, the available services in the services list may be limited.

3. Pressing the ⏮ button moves the sub-picture counter-clockwise, and pressing the ⏭ button moves it clockwise.

4. Pressing the SAT button swaps the main picture with the sub-picture. Even when you play back a recording, you can watch a live programme in the sub-picture. However, you cannot swap the pictures in that case.

5. If both pictures are pay services, only the main-picture will be displayed. To display two pay services, set the Descramble multiple services option to Enable referring to § 1.3.

Chapter 6

Editing Services

6.1 Editing the services list

You would have got the services list after service search. You can rename, move, lock or delete service entries on the services list.

Select the Installation > Edit Services > Edit Service List menu. You should see a screen like the left figure.

There are editing options on the left column and service entries on the right column.

Once you put the highlight bar on a desired option on the left column and press the OK button, you can select a desired service to edit on the right column. To go over to the other column, press the F1 button.

To edit the radio services list, press the [TV/RADIO] button; then radio service entries will be listed on the right column. To switch back to the television services list, press it again.

To change the name of a service, select the Rename and select a desired service; then the on-screen keyboard appears. See § 6.3 for how to use the on-screen keyboard.

Unlike analogue broadcasts, each service does not have a proper service number in digital broadcasts. Service numbers are just assigned to services in the order that they were found in service search. So you can reassign a service number by moving a service entry. To move a service entry, select the Move option and select a desired service; then the selected service becomes darker. As you move it up or down, it gets renumbered according to the position. Press the [OK] button to fix it.

You can lock some services to prevent your children from watching them. To lock a service, select the Lock option and select a desired service; then the selected service gets marked with a lock symbol (🔑) on it. If anyone tries to watch a locked service, the person has to enter the personal identification number that is set to the Change PIN Code option. See § 4.4 for this option. Pressing the [OK] button on a locked service entry turns it back to be unlocked.

To delete a service, select the Delete option and select a desired service with the [OK] button, and then press the [EXIT] button; you get asked for confirmation. If you select Yes, the selected service will be deleted. If you want to undo the deleted service, there is nothing you can do but perform a service search again.

Once you select the Sort option on the left column, sorting options are displayed as follows:

Default by service number

Alphabetic by service name

Satellite by satellite

FTA–CAS from free services to pay services

CAS–FTA from pay services to free services

Provider by broadcaster

Fav–NoFav from favourite services to unfavourite services.

Transponder by transponder

6.2 Editing the favourite list

You can make your own favourite services list. In fact, you can define multiple favourite services lists, each being a 'group' of chosen services.

Select the Installation > Edit Services > Edit Favorite List menu. You should see a screen like the left figure.

There are three columns:

- Group list (left)
- Favourites list (centre)
- Services list (right)

The services list contains all available services, whereas the favourite list contains only chosen services that have been added to the highlighted group. As you move the highlight bar up or down on the group list, favourite services belonging to the highlighted group get shown in the favourites list.

You can add up to 30 groups. To add a group, select the NEW option in the group list; then the on-screen keyboard appears. See § 6.3 for how to use the on-screen keyboard.

To rename a group, put the highlight bar on the group entry you want and press the F2 button; then the on-screen keyboard appears. See § 6.3 for how to use the on-screen keyboard.

To delete a group, put the highlight bar on the group entry you want and press the F3 button; then a message box appears asking you for confirmation. If you select Yes, it will be deleted.

You can add a favourite service to a group by taking the following steps:

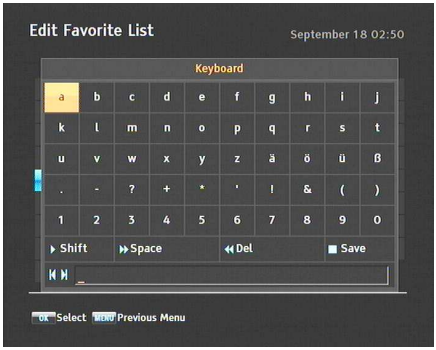
1. Put the highlight bar on a desired group entry in the group list and press the OK button to select it. The highlight bar then moves to the services list.
2. To add a service to the selected group, put the highlight bar on a desired service entry and press the OK button. The selected service entry gets added to the favourite list. Repeat this step to add more entries.
3. Press the F1 button and the highlight bar gets moved to the favourite list. You can delete a favourite entry with the OK button.
4. To select another group, press the F1 button again. By pressing the F1 button, the highlight bar gets moved to each column.

At the same time, you can rearrange a group's favourites by moving a favourite entry. To move a favourite entry, put the highlight bar on the favourite entry you want and press the F2 button. Move it to a desired place and press the OK button.

To add radio services, press the button at the services list column; then radio service entries get listed in the services list. To recall the television services list after adding radio services, press the button again.

With your favourite services list, you can select your favourite services more easily. Refer to § 5.2.2 for detailed description.

6.3 How to use the on-screen keyboard


Edit Favorite List
September 18 02:50
Keyboard
a b c d e f g h i j
k l m n o p q r s t
u v w x y z ä ö ü ß
. - ? + * ' ! & ( )
1 2 3 4 5 6 7 8 9 0
Shift
Space
Del
Save
OK Select
MENU Previous Menu

You can move the highlight key horizontally with the and buttons and vertically with the and buttons. Pressing the OK button on a key enters its letter in the input line. To type a space, select the Space key. To type lower case letters or numerals, select the Shift key.

To delete a letter, put the cursor to the right of the desired letter on the input line and then select the Del key. You must select the Save key to store the name; otherwise if you press the EXIT button, the name will not be stored.

Chapter 7

Recording and Playing

You can record a service to an external hard disk drive as well as the built-in hard disk drive.

NOTE

To use an external hard disk drive, you must connect the external hard disk drive to the USB port of the digital receiver. The hard disk drive should have its own power supply. Because the digital receiver cannot provide enough power for the external hard disk drive.

CAUTION

Do not disconnect the external hard disk drive while recording or playing back. It may cause damage to recorded programmes. You should disconnect the external hard disk drive in standby mode only.

You can record a service while watching another with the SRP-2100 digital receiver.

You can record two different services while watching another if two of the services are provided through the same transponder.

The SRP - 2100 digital receiver has two tuners so that you can enjoy the following:

- While playing a recording back, you can watch a service in the sub-picture using the picture-in-picture feature.
- You can record two different services while playing back a previously recorded programme.
- You can even record two different services while watching two other different services—only if two or more services are provided in a same transponder and the other services are provided in another same transponder. In this case, you can watch two services at the same time using the picture-in-picture feature. See § 5.6 for the picture-in-picture feature.

7.1 Recording a programme

Once recording has started, a symbol like the left figure will be displayed at the top right of the screen for a few seconds.

When you are watching a different service from the service being recorded, you will see a number on the centre of the symbol, this indicates the order that the recording has started.

To record two programmes simultaneously, two tuners are allocated for the recording. Therefore, you can only change to a limited number of services while the two programmes are being recorded.

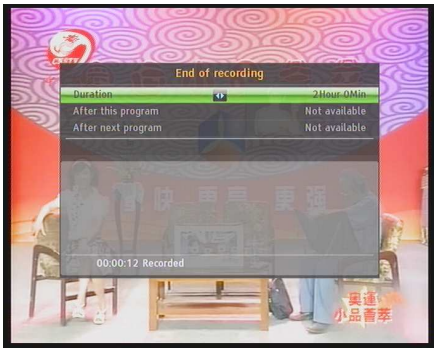
CAUTION

Do not move the digital receiver nor pull out the power plug while it is running. It may cause damage to recorded programmes. Topfield is not responsible for damages inflicted on files that are stored on the hard disk drive.

7.1.1 Instant recording

To instantly record a programme you are watching at present, press the [●] button.

Pressing the [II] button will not pause the current recording like it does with a video cassette recorder. Instead, pressing the [II] button will pause the live show and begin time shifting within the current recording even with the Time Shifting option disabled. However, it is still possible to pause a recording.



After a recording is started, pressing the [●] button displays a menu like the left figure, in which you can set the recording duration.

To specify an arbitrary recording duration, set the Duration option as you desire with the and buttons and press the [OK] button; the recording will end at the specified time.

If the information about the next programme is provided by the electronic programme guide, the 'After this program' and 'After next program' options will be enabled. Once the 'After this program' option is selected, the current recording will stop when the current programme is scheduled to end. Likewise, once the 'After next program' option is selected, the current recording will stop when the next programme is scheduled to end.

To stop recording, press the ■ button; then a box like the left figure appears, which shows programmes currently being recorded. If you select one, its recording will stop.

While a recording is going on, you can watch or record another service. To additionally record another service, switch to the service you want to record, and press the ● button.

Once a recording is started, it is put on the recorded programme list even though it is not finished yet. The recording file is named after its service name with a suffix of a number.

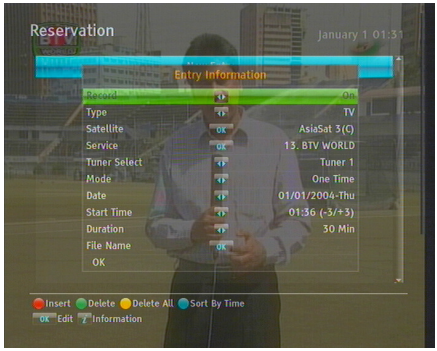
To view the recorded programme list, press the ▤ button or alternatively select the Recording > Recorded Program menu.

See § 7.2 for detailed description about the recorded programme list.

7.1.2 Recording Reservation

You can set a service to be recorded at a specific time. Even if the digital receiver is in standby mode, it will switch into operation mode and start recording at a specified time. When the recording comes to the end, the digital receiver will switch back into standby mode again in one minute.

However, if you press any button on the remote control or on the front panel even just one time, the digital receiver will not switch into standby mode.



To add a timer recording, select the Recording > Reservation menu; then the timer list will be displayed.

To add a new timer event, press the F1 button, and a box like the left figure appears. Take the following steps:

1. Set the Record option to On to make a recording. If this option is set to Off, the digital receiver will turn on at the specified time but not record; instead, you may record with your video cassette recorder or suchlike in this case.

2. If you want a radio programme, set the Type option to Radio; otherwise, set this option to TV.

3. Set the Satellite option to the satellite which transmits the service you want. Pressing the OK button on this option displays a satellite list, from which you can select your desired satellite. Set the Tuner Select option to a tuner to receive your desired service.

4. Set the Service option to the service which provides the programme you want. Pressing the OK button on this option displays a services list, from which you can select your desired service.

5. Set the Mode option as you desire. There are five timer modes:

   One Time means literally 'one time'.

   Every Day means literally 'every day'.

   Every Weekend means 'Saturday and Sunday every week'.

Weekly means 'one day every week'.

Every Weekday means 'from Monday to Friday every week'.

If your favourite programme is broadcast at weekends and you wish to record every episode of the programme, set the Mode option to Every Weekend.

6. Set the Date option to a desired date, on which the digital receiver will turn on. The date format is *day/month/year-day of the week*.

   Set the Start Time option to a desired time, at which the recording will be started. The time format is *hour:minute*.

7. Set the Duration option to a desired time, in which the recording will be finished.

8. Pressing the OK button on the File Name option displays the on-screen keyboard, with which you can specify a file name for the timer recording. If you do not specify anything, it will be named after the service name. See § 6.3 for how to use the on-screen keyboard.

9. To set a recording reservation with the above settings, select the OK item; otherwise, it will not be saved and will not occur.

You can also edit or delete timer events in the timer list.

To edit a timer entry, put the highlight bar on the entry you want and press OK button; then appears a box in which you can change its settings in the same manner as making a new one.

To delete a timer event, put the highlight bar on the entry you want to remove and press the F2 button; then you get asked for confirmation. If you select Yes, it will be deleted.

To delete all timer event, press the F3 button.

You can sort timer events by time with the F4 button.

7.1.3 Scheduling recordings using the programme guide

If the electronic programme guide is properly provided, you can make timer events on it. The instructions on how to make timer recordings using the electronic programme guide are as follows:

1. Press the GUIDE button to display the electronic programme guide.
2. Select a programme you want to record with the navigation buttons.
3. To make a timer event without recording, press the OK button; the letter **P** is displayed. To make a timer event with recording, press it once more or alternatively press the ● button; then the letter **R** is displayed.
4. Pressing the OK button once more will cancel the timer.

7.1.4 Recording a time-shifted programme

While watching a programme with time shift, you can record it by performing the following steps:

1. Press the ▶ button to display the progress bar.
2. To move to the beginning of the desired scene, hold down the ◀◀ or ▶▶ button until it is reached.
3. Press the ● button to start recording. The time shift buffer from that position onwards will now be recorded.

4. Press the ■ button to stop recording.
5. Press the ■ button once more to stop time shift.

See § 5.5 for detailed description about the time shift feature.

NOTE

You cannot watch a time-shift recorded file in fast motion and slow motion during playback.

7.1.5 Recording a pay service programme

You can record a pay service programme without the subscription card. However, you need the subscription card to play it back because it has not been descrambled. So it is recommended recording pay service programmes with the subscription card so that they can be recorded in descrambled form. In that case, you can enjoy them without the subscription card like free services.

To record a programme of a pay service in descrambled form, perform the following steps:

1. Select a programme of a pay service you want to record.
2. Make sure that the subscription card is inserted in the slot on the front of the digital receiver.
3. Start recording.
4. Do not switch to other service nor use time shift until it is finished.

NOTE

You cannot watch a pay service recorded file in fast motion and slow motion during playback.

NOTE

If you switch to other service or use time shift in the middle of recording a pay programme, it will be recorded without descrambling from that moment. Even if the recording is only partially descrambled, you need the subscription card to play it back.

7.2 File archive

When a programme is recorded, it is stored as a file on the hard disk drive of the digital receiver. You can select a recording to play back from the recorded programme list.

Select the Recording > Recorded Program menu or alternatively press the [≡] button to display the recorded programme list.

The file information is comprised of the following elements: file number, file name, recording time, playing duration, file size and so on.

You can play, move, delete, rename and lock a recording file. You can also sort the recording files by file name, playing duration or file size. In addition, you can make a new folder.

7.2.1 To delete a recording

To delete a recording, put the highlight bar on it and press the [F4] button; then you get asked for confirmation. If you select Yes, it will be deleted.

7.2.2 To sort recordings

To sort the recordings, perform the following steps:

1. Press the Option button to display the additional options.
2. Set the Sorting option to Alphabetic, Time or Size as you want.
3. Press the EXIT button.
4. They will be sorted by the specified option.

7.2.3 To lock a recording

To lock a recording so that other people cannot play or delete it, perform the following steps:

1. Put the highlight bar on a desired recording.
2. Press the Option button to display the additional options.
3. Set the Lock option to Locked.
4. Press the EXIT button.
5. The lock symbol ( ) is displayed on it.

If you select a locked recording to play it back, you will be asked for your personal identification number.

7.2.4 To rename a recording

To change the name of a recording, perform the following steps:

1. Put the highlight bar on a desired recording.
2. Press the Option button to display the additional options.
3. Select the Rename option, and the on-screen keyboard appears. Change the name and save it. See § 6.3 for how to use the on-screen keyboard.

7.2.5 To make a new folder

To make a new folder, press the F2 button; then a new folder named GROUP # is created. You can change its name in the same manner as renaming a recording. See above.

7.2.6 To move a recording to another folder

To move a recording to another folder, put the highlight bar on a desired recording and press the F3 button. If an external hard disk drive is connected to the digital receiver, you get asked to select between the built-in and external hard disk drive. Select Internal; then the folders are listed. Once you choose a folder, the recording is moved to it.

7.3 Playing back a recording

When a programme is recorded, its additional contents such as audio tracks or teletext are also recorded together. So you can enjoy them while playing back a recording.

The instructions on how to play a recording are as follows:

1. Select the Recording > Recorded Program menu or alternatively press the button to display the list of recorded programmes.
2. Put the highlight bar on a desired recording and press the OK button.
3. Select Play option and press the OK button to start playback. In addition, you can set play mode options as follow:
    - If you want to playback the file from beginning, set the Starting Position option to Beginning. To play back the file from the part where you were watching, set this option to Continuing.

- To descramble the file, set the Descramble Mode to Auto Recording.

4. To stop playback, press the ■ button.

During a playback, you can enjoy the following tricks:

- To see the detailed information about the currently played recording, press the *i* button; then the information box appears and shows its file name, playing duration, programme information, and so on.
- To pause playback, press the ⏸ button. To resume it, press the ▶ button.
- To go forward, hold down the ⏩ button; to go backward, hold down the ⏪ button.
- To display the progress bar, press the ▶ button; to hide it, press the ▶ button again.
- When the progress bar is hidden, you can move to a desired scene by entering the percentage with the numeric buttons.

7.3.1 To navigate using the progress bar

First press the ▶ button to display the progress bar, then:

- To go forward, hold down the ⏩ button; to go backward, hold down the ⏪ button.
- To bookmark a position, refer to § 7.3.4.
- If there are no bookmarks, you can jump forward about 15 seconds at a time by pressing the F3 button.
- To jump to start of a recording, press the ⏮ button.
- To jump to end of a recording, press the ⏭ button.
- To hide the progress bar, press the ▶ button again.

7.3.2 To play in slow motion

To watch in slow motion during a playback, press the ▶❙ button. If you press it repeatedly, the playback speed changes in 4 steps: 1/2, 1/4, 1/8 and 1/16 times. To resume normal speed, press the ▶ button.

7.3.3 To play in fast motion

To watch in fast motion during a playback, press the ▶▶ button. If you press it repeatedly, the playback speed changes. To resume normal speed, press the ▶ button.

You can play not only forward but also backward in fast motion. To play backward, press the ◀◀ button. If you press it repeatedly, the playback speed changes. To resume normal speed, press the ▶ button.

You can change the playback speed in 3 steps (4, 16 and 64 times) or in 6 steps (2, 4, 8, 16, 32 and 64 times). See § 4.6.

7.3.4 To make a bookmark

You can mark favourite parts of a recording by creating bookmarks, and then jump to them. Bookmarks are stored with the recording so that you can use them again afterwards. To make bookmarks, perform the following steps during playback:

1. Press the ▶ button to display the progress bar.
2. To add a bookmark, press the F2 button at a desired scene; then you will see a small dot appear above the progress bar like in the picture above.

3. To jump forward to next bookmark, press the F3 button.
4. To jump to first bookmark, press the ⏮ button then the F3 button.
5. To delete a bookmark, jump to it and then press the F2 button.

7.3.5 To play back a recording repeatedly

You can play back a recording repeatedly both in whole and in part.

To play back in whole, press the ⏭ button when the progress bar is hidden; then the repetition symbol (↻) is displayed on the information box. To cancel it, press the ⏭ button again.

To play back in part, perform the following steps:

1. Press the ▶ button to display the progress bar.
2. Move to the beginning scene of the part you want to play repeatedly by holding down the ◀◀ or ▶▶ button.
3. Press the ⏭ button, then the pointer starts to blink.
4. Move to the end scene; the part is marked in black.
5. Press the ⏭ button again to start repeated playback.
6. To cancel it, press the ⏭ button when the progress bar is displayed.

7.3.6 To play back recordings in sequence

You can play several recordings continuously in sequence by performing the following steps:

1. Press the ☰ button or alternatively select the Recording > Recorded Program menu to display the list of recorded programmes.

2. Select each desired recording with the F1 button. Once a recording is selected, it gets numbered.
3. Press the ▸ button to start playback.
4. The selected recordings are played in the sequence that they are numbered.
5. To jump to start of next selected recording, press the ▸ button to display the progress bar, then press the ▸| button.

7.3.7 To play back a scrambled recording

If you have recorded a programme of a pay service with the subscription card, you can play it as freely like one of a free service. Otherwise you need the subscription card to play it back, because it has been recorded without unscrambling even though it may have been partially descrambled.

On the recorded programme list, a purely green **$** indicates the recording has been wholly descrambled; on the other hand, a yellowish green **$** indicates it has been partially descrambled, and a purely yellow **$** indicates it has not been descrambled at all.

Refer to § 7.1.5 for how to record a pay service programme.

7.4 Editing a recording

You can cut out or save a part such as commercial from a recording by performing the following steps:

1. Press the ▸ button to display the progress bar during a playback.
2. Move to the beginning scene of the part you want to edit by holding down the ◂◂ or ▸▸ button.
3. Press the |◂◂ ▸▸| button, then the pointer starts to blink.

4. Move to the end scene; the part is marked in black.
5. Press the F4 button, then the edit options are displayed.
6. If you choose the Cut option, it will be removed from the original recording and discarded.
7. If you choose the Save option, the cut will be saved in a new file which is named after the original recording with a suffix of 'CUT' and a number.

NOTE

You can use only 2 times speed in fast motion during playback of a edited file. And you cannot watch a edited file in slow motion.

7.5 Copying a recording

When you record a pay service without the subscription card, the recorded file will not be descrambled.

You can descramble and record the file in whole or in part during a playback by performing the following steps:

1. Start playback of a recording you want.
2. Make sure that the subscription card is inserted in the slot on the front of the digital receiver.
3. Move to a scene from which you want to start copy by holding down the ◂◂ or ▸▸ button.
4. Press the ● button, then it will be copied in a new file which is named after the original recording with a suffix of 'COPY' and a number.
5. To stop copying, press the ■ button.

7.6 Formatting the hard disk

You can delete all contents stored in a hard disk drive by formatting it. If you wish to do that, select the Installation > System Recovery > Format Hard Disk menu; then select the hard disk driver which you want to format. To format the built-in hard disk drive, select the option to Internal; otherwise, select the option to External to format an external hard disk drive which is connected to the digital receiver. After selecting it, press the OK button, then you get asked for confirmation. If you select Yes, formatting will start.

CAUTION

Formatting the hard disk will delete all files permanently.

NOTE

If a new hard disk drive is installed, it must be formatted because the file system of the digital receiver is different from any of the personal computer. You can neither record nor use time shift with an unformatted hard disk.

Chapter 8

Special Features

The SRP - 2100 has special features as MP3 playback, YouTube playback, network game and so forth.

NOTE

To fully enjoy those functions, you have to configure the network settings correctly; otherwise, the function does not work or partially works. For how to configure the network settings, refer to § 9.2.

8.1 Playing back MP3 files

You can enjoy music or audio books in MP3 format on the digital receiver.

Refer to § 8.4 for how to copy a file from an external hard disk drive into the built-in hard disk drive of the digital receiver.

To play an MP3 file, perform the following steps:

1. Select the Entertainment > MP3 Player or press the [≡] button and then the [◀◀] or [▶▶] button to display the MP3 file list.

2. Put the highlight bar on a desired file; if you want to play several files, select them with the F1 button.
3. Press the ▶ button to start playback.
4. To stop playback, press the ■ button.

To play all MP3 files in a subfolder, put the highlight bar on a desired folder, and press the ▶ button.

8.2 Playing back video files

You can enjoy video files in DivX, vob, mkv, or mp4 format on the digital receiver.

NOTE

The SRP-2100 supports only DivX 3.x, 4.x and 5.x.

Refer to § 8.4 for how to copy a file from an external hard disk drive into the built-in hard disk drive of the digital receiver.

To play a video file, perform the following steps:

1. Select the Entertainment > Media Player or press the ☰ button, and then the ◀◀ or ▶▶ button to display the video file list.
2. Put the highlight bar on a desired file; if you want to play several files, select them with the F1 button.
3. Press the ▶ button to start playback.
4. To stop playback, press the ■ button.

8.3 Viewing graphic files

You can view graphic files in jpg format with the digital receiver.

To view a jpg file, perform the following steps:

1. Select the Entertainment > Photo Album or press the [▤] button, and then the [◂◂] or [▸▸] button to display the list of graphic files.
2. Put the highlight bar on a desired file and press the [OK] button; if you want to view several files using a slide show, press the [F1] button. You can change a time interval and effect of slideshow. See § 4.11.
3. To stop viewing, press the [EXIT] button.

8.4 Copying files

You can copy files between the built-in hard disk drive and external hard disk drive.

NOTE

If your external hard disk drive is formatted in the FAT16/32 or NTFS, it can only be read. To enable to write and read, the hard disk drive must be formatted in the JFS or Ext2/3 file system. For how to format in the JFS or EXT2/3 file system, refer to § 7.6. In addition, the digital receiver can only recognize files and directories which are named with only alphabetic, numeric and underscore letters. If there is a file or folder named with other letters, the digital receiver cannot recognize not only it but also its subsequent files and folders.

8.4.1 To copy a file to an external hard disk drive

You can copy files to an external hard disk drive.

To copy files, perform the following steps:

1. Connect an external hard disk drive to the digital receiver.
2. Press the [▤] button and then press the [◂◂] or [▸▸] button to select a desird file list except the External list.

3. Put the highlight bar on a desired file and press the F3 button.; then you get asked to select between the built-in and external hard disk drive.
4. Select External; then the folders are listed.
5. Select a folder and press the OK button; then the selected file will be copied into the external hard disk drive.

8.4.2 To copy a file from an external hard disk drive

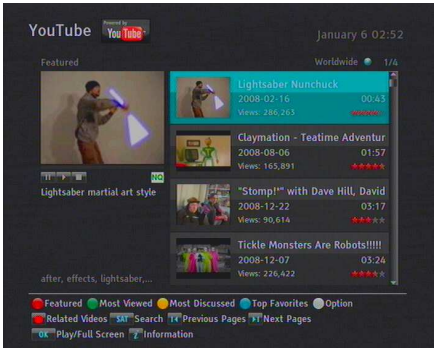
You can copy files from an external hard disk drive.

To copy file, perform the following steps:

1. Connect an external hard disk drive to the digital receiver.
2. Press the button and then press the ◀◀ or ▶▶ button to select the External Device List.
3. Put the highlight bar on a desired file and press the F3 button.; then the list of folders gets displayed.
4. Select a folder in the built-in hard disk drive.
5. Press the OK button; then the selected file will be copied into the built-in hard disk drive.

8.5 Playing back contents of YouTube

YouTube is a video sharing website where users can upload, view and share video files. With the SRP - 2100, you can access YouTube and play back various contents.



When you select the Entertainment > YouTube, you should see a screen like the left figure.

To play back a YouTube content, select a content with the ◎ and ◎ buttons and press the OK button. To play back the content with full screen, press the OK button again.

You can sort the contents with the option buttons as follows:

- F1 button by most featured
- F2 button by view count
- F3 button from most discussed to least discussed
- F4 button by top favourites
- ● button related contents

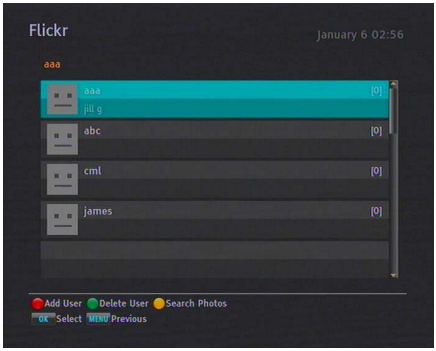
By pressing the Option button, you can sort the contents by the updated date, country and quality.

You can also search contents by a specific keyword. To search contents by a keyword, press the SAT button; then the on-screen keyboard appears. See § 6.3 for how to use the on-screen keyboard.

To see detailed information about the current one, press the *i* button. To hide the information box, press the EXIT button.

8.6 Sharing image files by Flickr

Flickr is an image hosting website and on-line community platform. You can search a image file from the network server and view the file using the Flickr.



To use this function, select the Entertainment > Flickr.

You can see image files which belong to a specific user by adding a user. To add a user, perform the following steps:

1. Press the F1 button, then the on-screen keyboard appears.
2. Enter a desired user name. For how to use the keyboard, refer to § 6.3.
3. After adding a user, select the user with the and buttons and press the OK button.

To delete a user, put the highlight bar on a desired user and press the F2 button; then you get asked for confirmation. If you select YES, it will be deleted.

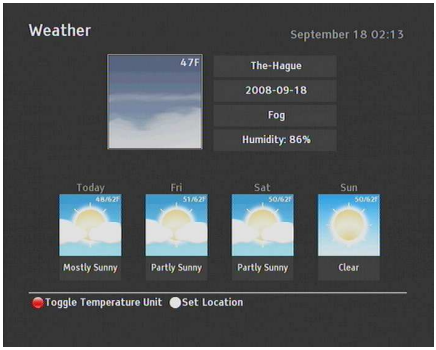
You can also search image files by a specific keyword. To do that, perform the following steps:

1. Press the F3 button to go to the keyword search mode.
2. Press the F1 button, then the on-screen keyboard appears.
3. Write down a keyword as you desire. For how to use the keyboard, refer to § 6.3.
4. Select the Save key on the on-screen keyboard to start searching image files.

To save a image file to the photo album, press the Option button. For the photo album see § 8.3.

8.7 Weather

You can view the weather of your city or other cities.



To view the weather, select the Entertainment > Weather; then you should see a screen like the left figure.

To change a city, perform the following steps:

1. Press the F1 button to see additional options.
2. Set the Country and City options as you desire with the navigation buttons.
3. Press the EXIT button.

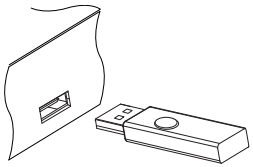
Pressing the Option button toggles between the Centigrade and Fahrenheit.

8.8 Network Game

You can play network game on the digital receiver. You can play the game by yourself or with others via the network.

8.8.1 To use the wireless keyboard

You can use a wireless keyboard to play the game as well as the remote control.



To use the wireless keyboard, plug the wireless module into the USB port on the digital receiver.

NOTE

Use only the provided wireless keyboard. If you use other wireless keyboard besides the provided one, the digital receiver may not work properly.

8.8.2 Battle Tank Single Mode

To play the battle tank single mode, select the Entertainment > Game > Battle Tank (Single); then perform the following steps:

1. Select a game mode.
2. Select a character.
3. Buy items as you desire.
4. Select a map. If you play the game by yourself, you do not need to select a map.
5. Start playing.

If you want to out of the game while palying, press the EXIT button on the remote control or the Esc key on the keyboard.

Selecting a game mode

When you select the Entertainment > Game > Battle Tank(Single), you should see a screen like the left figure.

You can select a game mode as you desire. If you want to out of the game, select the EXIT option.

There are two modes as below:

Single play playing by yourself.

Double play playing with another user.

If you are using the remote control, select a mode with the ◉ and ◉ buttons and press the OK button.

If you are using a keyboard, select a mode with the up and down arrow keys and press the space bar.

Selecting a character

After selecting a game mode, you should see a screen like the left figure.

Select a character referring to Table 8.1.

If you select the ?, a character will be chosen randomly.

When you play the game first time, you can select only two characters. To get a new character, you have to play the single mode and clear all stages (13 satges).

Table 8.1: Buttons for selection

	Remote Control		Keyboard	
Action	**1 Player**	**2 Player**	**1 Player**	**2 Player**
Left			Left arrow	**A**
Right			Right arrow	**D**
Up			Up arrow	**W**
Down			Down arrow	**S**
Select	OK	F2	Space bar	Enter

You can see the selected character's information of the 1 Player on the left bottom of the screen. Also you can see the selected character's information of the COM or 2 Player on the right bottom of the screen.

NOTE

You have to select a character in 30 seconds; otherwise, the character will be selected automatically.

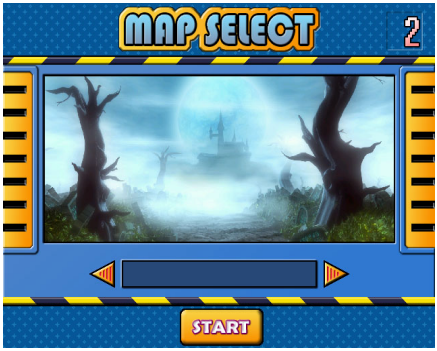
Buying items

After selecting a character, you should see a screen like the left figure. Buy a item referring to Table 8.1.

When you finish selecting items, select the READY on the screen as follows:

- **1 Player with the remote control** : Select the READY using the MENU button and press the OK button.
- **2 Player with the remote control** : Select the READY using the F1 button and press the F2 button.
- **1 Player with the keyboard** : Select the READY using the Tap key and press the space bar.
- **2 Player with the keyboard** : Select the READY using the Q key and press the Enter key.

Selecting a map



After buying items, you should see a screen like the left figure.

If you are using the remote control, select a map with the and buttons.

If you are using a keyboard, select a map with the left and right arrow keys.

After selecting a map, select the START on the screen.

If you are using the remote control, select the START using the MENU button and press the OK button.

If you are using the keyboard, select the START using the Tap key and press the space bar.

NOTE

If you play the game by yourself, you do not need to select a map.

Playing the Battle Tank

When you start the game, you should see a sceen like the following figure. Play the game referring to Table 8.2.

① The character's weapons.

② The angle of the character.

③ You can see the direction and speed of wind.

④ You can see the information of the character as follows:

ENERGY displays the character's energy.
POWER displays the power of shot.
MOVE displays the movement bar.

⑤ You can check your position and enemy's position on this mini-map.

⑥ You can use those items during playing game.

⑦ Displays current player.

⑧ Displays the turn time. If the time is over, turn will be changed to the other player.

Table 8.2: Buttons for playing

Action	Remote Control	Keyboard
Changing weapon	3 4	**F3 F4**
Changing angle		up and down arrows
Moving character		left and right arrows
Using items	7 8 9 0	**F9 F10 F11 F12**
Skipping turn	5	**F5**
Changing view of map		**W A S D**
Firing a shot	OK	Space bar

8.8.3 Battle Tank Network Mode

To play the Battle Tank Network Mode, select the Entertainment > Game > Battle Tank (Network); then perform the following steps:

1. Select a game server.
2. Log on to the game server.
3. Joining a game.
4. Selecting a character, map and items for playing.
5. Start playing.

NOTE

Refer to the BATTLE TANK user guide for how to play the Battle Tank Network Mode. You can download the guide on our website. (http://www.i-topfield.com)

Chapter 9

Accessing to The Digital Receiver via The Internet

NOTE

The following section describes complex functions that should only be used by owners with advanced computer knowledge.

SRP - 2100 provides a web service and FTP service. You can make scheduled recordings or download recording files to your computer via these services. Here you need a router, which will connect the digital receiver to your computer or to the Internet. To use the network features of the digital receiver, you should take the following steps:

1. Configuring your router for the digital receiver.
2. Configuring the Local Area Network (LAN) settings on the digital receiver.
3. Accessing the home page of the digital receiver. Refer to § 9.3 for detailed description about things you can do by way of the web service of the digital receiver.

4. Accessing the FTP Server of the digital receiver.

NOTE

The web server and FTP server of the digital receiver do not work in standby mode. So it must be powered up at all times if you wish to use the web service at any time.

9.1 Configuring the router

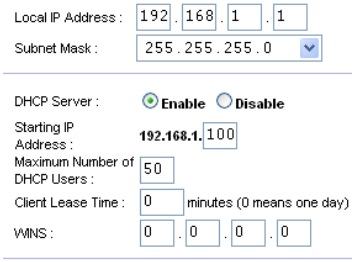
In this section, the setup program of *WRT54G*, which is a router manufactured by *Linksys*, will be referred to as an example of how to configure the router for network access.

NOTE

For detailed description about how to set up the router, refer to the manual of your router.

9.1.1 To access within the local area network

Once your router is powered up, a local area network gets created whether or not it is connected to the Internet.


Local IP Address : 192 . 168 . 1 . 1
Subnet Mask : 255.255.255.0
DHCP Server : Enable Disable
Starting IP Address : 192.168.1. 100
Maximum Number of DHCP Users : 50
Client Lease Time : 0 minutes (0 means one day)
WINS : 0 . 0 . 0 . 0

You can let the router automatically assign a dynamic IP address to the computers or devices connected to the network by enabling the DHCP server of the router. In this case, you can access the digital receiver with the IP address which is assigned to the digital receiver by the router.

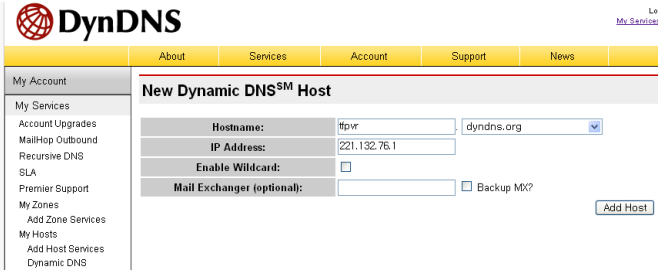
If the digital receiver reboots, a new dynamic IP address will be assigned to it. You had better assign a static IP address to the digital receiver to avoid this inconvenience. For how to assign a static IP address, refer to the manual of your router. For how to specify a static IP address on the digital receiver, see § 9.2.

9.1.2 To access over the Internet

When you are away from home, you can access the digital receiver inside your home if your router is configured to route access to the digital receiver by means of port forwarding. Via this feature, your router will lead you to the digital receiver when you access your router with its IP address.

Port Range					
Application	Start	End	Protocol	IP Address	Enable
PVRHTTP	80 to	80	Both	192.168.1. 161	☑
PVRFTP	20 to	21	Both	192.168.1. 161	☑
	0 to	0	Both	192.168.1. 0	☐
	0 to	0	Both	192.168.1. 0	☐

Your router may be assigned to a dynamic IP address by an Internet service provider. So if the router has rebooted, you cannot access it unless someone in your home can inform you of the changed IP address. However, many routers support Dynamic Domain Name System (DDNS) service, which can settle this problem. The following image is an example of one such DDNS service provider.



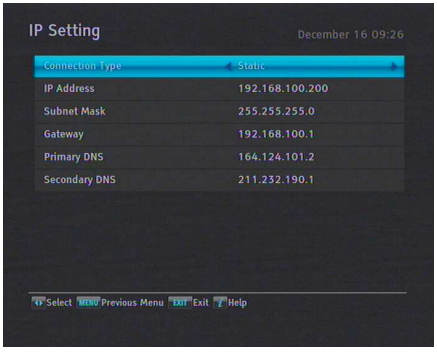
If you use a DDNS service, you can access your router with a domain name. The instructions on how to use the DDNS service are as follows:

1. Make an account on a web site providing DDNS service, which should be supported by your router.
2. Configure your router with the account so that it can communicate with the web site.

Whenever a new dynamic IP address is assigned to the router, it will inform the DDNS service provider of the new IP address. This makes it possible that you access the router with a domain name at any time.

9.2 Configuring the network settings on the digital receiver

You should configure the LAN settings to enable the web service and FTP service.



Select the Installation > Network Setting > IP Setting menu.

You may get the digital receiver to be assigned a dynamic IP address. If so, set the Connection Type option to DHCP.

You can view the dynamic IP address assigned to the digital receiver by your router at the IP Setting menu.

Sometimes when the digital receiver is restarted, the dynamic IP address will be changed and you will have to check it at the IP Setting menu to access the digital receiver. To avoid this cumbersome thing, you had better assign a static IP address rather than dynamic one.

To assign a static IP address, set the Connection Type option to Static, then the IP Address, Subnet Mask, Gateway, Primary DNS and Secondary DNS options become enabled. You have to set these options to match with the configuration of your router.

9.3 Accessing the web server

To Access to the web server, set the Installation > Network Setting > Web Server option to Enable.

Select the Installation > Network Setting > User Info menu. At this time, you have to enter Personal Identification Number (PIN). Then, set the User ID and Password options as you desire. And select OK to save the settings. When you access to the web server, you will be asked for the account that was made with these options.

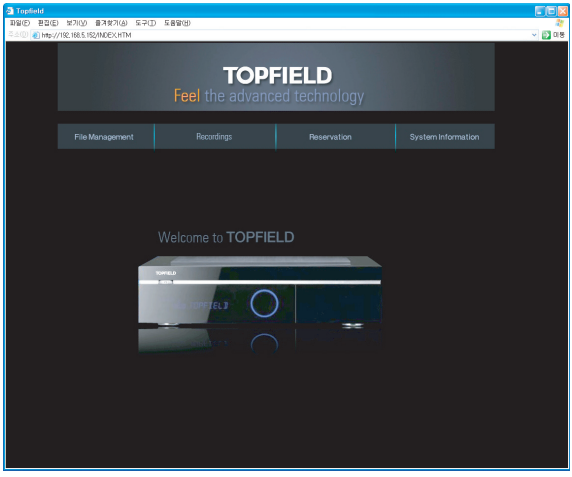
In way of the web server of the digital receiver, you can do the following:

- Download recording files.
- Create new recording timers.
- View information about the programme currently being recorded.
- View the system information of the digital receiver.

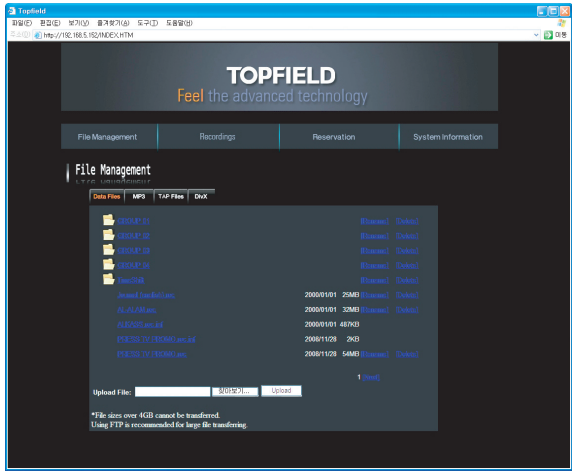
NOTE

It is recommended using the *Internet Explorer* web browser in order to fully enjoy the features. If you use a different web browser such as *Netscape Navigator*, some problems may occur.

To access the digital receiver's home page through your web browser, enter its IP address, or domain name if you use a DDNS service. For the DDNS service, refer to the user manual of your router.



You cannot only download but also upload recording files or MP3 files in the File Management page. However, if you wish to download or upload a file of which size is 2 gigabyte or more, it is recommended using the FTP server rather than the web server.



NOTE

The maximum number of user connections is one. This means that you cannot access the web server while someone else is occupying it.

9.4 Accessing the FTP server

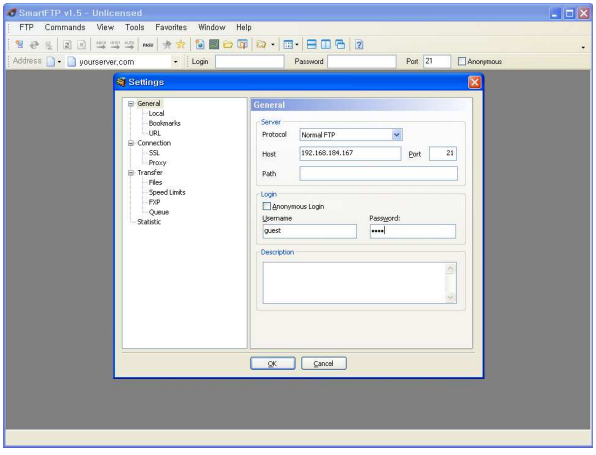
To Access to the FTP server, set the Installation > Network Setting > FTP Server option to Enable.

Select the Installation > Network Setting > User Info menu. At this time, you have to enter Personal Identification Number (PIN). Then, set the User ID and Password options as you desire. And select OK to save the settings. When you access to the FTP server, you will be asked for the account that was made with these options.

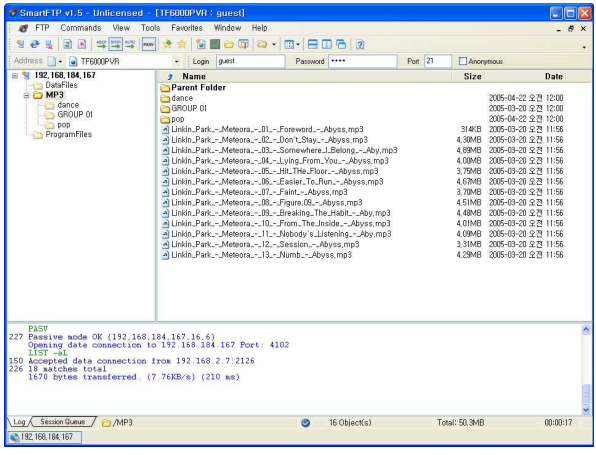
NOTE

You can access the FTP server with an anonymous account. However, with an anonymous account you can only download files. You cannot upload files.

You need an FTP client program to access the FTP server of the digital receiver.



You can log into the FTP server with the user name and password specified in the Installation > Network Setting > User Info menu.


SmartFTP v1.5 - Unlicensed - [TF6000PVR : guest]
FTP Commands View Tools Favorites Window Help
Address TF6000PVR Login guest Password Port 21 Anonymous
192.168.184.167
DataFiles
MP3
dance
GROUP 01
pop
ProgramFiles
Name Size Date
Parent Folder
dance 2005-04-22 오전 12:00
GROUP 01 2005-03-20 오전 12:00
pop 2005-04-22 오전 12:00
Linkin_Park_-_Meteora_-_01_-_Foreword_-_Abyss.mp3 314KB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_02_-_Don't_Stay_-_Abyss.mp3 4.30MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_03_-_Somewhere_I_Belong_-_Aby.mp3 4.69MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_04_-_Lying_From_You_-_Abyss.mp3 4.00MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_05_-_Hit_THe_Floor_-_Abyss.mp3 3.75MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_06_-_Easier_To_Run_-_Abyss.mp3 4.67MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_07_-_Faint_-_Abyss.mp3 3.70MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_08_-_Figure.09_-_Abyss.mp3 4.51MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_09_-_Breaking_The_Habit_-_Aby.mp3 4.48MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_10_-_From_The_Inside_-_Abyss.mp3 4.01MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_11_-_Nobody's_Listening_-_Aby.mp3 4.08MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_12_-_Session_-_Abyss.mp3 3.31MB 2005-03-20 오전 11:56
Linkin_Park_-_Meteora_-_13_-_Numb_-_Abyss.mp3 4.29MB 2005-03-20 오전 11:56
PASV
227 Passive mode OK (192,168,184,167,16,6)
Opening data connection to 192.168.184.167 Port: 4102
LIST -aL
150 Accepted data connection from 192.168.2.7:2126
226 18 matches total
1670 bytes transferred. (7.76KB/s) (210 ms)
Log Session Queue /MP3 16 Object(s) Total: 50.3MB 00:00:17
192.168.184.167

NOTE

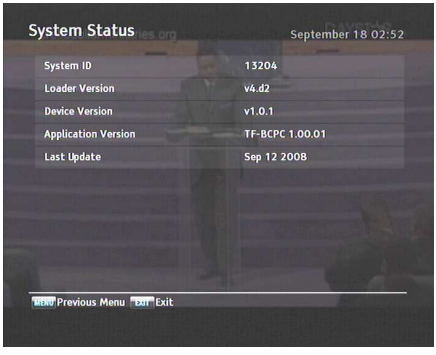
The maximum number of user connections is one. This means that you cannot access the FTP server while someone else is occupying it.

Chapter 10

Firmware Update

The digital receiver has a stable and convenient firmware to use. However, once in a while a new firmware may be released to improve performance. You can get the latest firmware and a firmware update tool, which runs on most versions of Windows, from the Topfield web site, http://www.i-topfield.com.

10.1 Checking the firmware information



You have to check the firmware information of your digital receiver before downloading a new firmware. Select the Information > System Status menu. You should see a screen like the left figure.

Remember the number of the System ID item, and download the latest firmware with the same system identification.

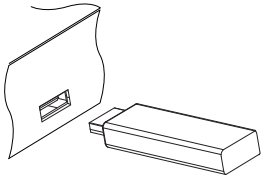
NOTE

It is only allowed to update with the firmware of which system identification is identical to that of yours. Otherwise you will fail to update a firmware.

Please check for your relevent firmware under your model number on the web site.

10.2 From a USB memory

If you have a USB memory stick, you can update the firmware from it by performing the following steps:



1. Download a new firmware from the Topfield web site.
2. Copy the firmware file to your USB memory stick.
3. Insert the USB memory stick into the USB port of the digital receiver.
4. Select the Installation > Firmware Upgrade > USB Firmware Upgrade menu, then the files in the USB memory are listed.
5. Place the highlight bar on the right firmware file and press the OK button, then a countdown will be displayed on the front display of the digital receiver.
6. When the 'END' message appears, restart the digital receiver.

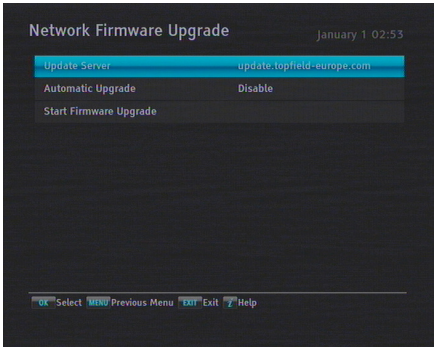
10.3 From the firmware server via the network

You can update the firmware from the firmware server which is run by Topfield via the network. Make sure that the digital

receiver is connected to your router before configuring the network settings on the digital receiver.

NOTE

For detailed description about how to set up the router, refer to the manual of your router.



Select the Installation > Firmware Upgrade > Network Firmware Upgrade menu.

You should see a screen like the left figure.

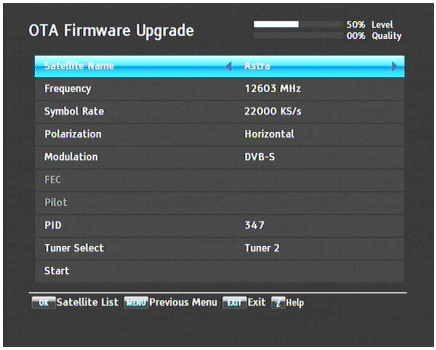
To enable the digital receiver to update the firmware automatically when a new firmware is available, set the Automatic Upgrade option to Enable.

Otherwise if you want to do that by yourself, select the Start firmware upgrade option; then you get asked for confirmation. If you select Yes, it checks up whether a new firmware is available, and if any, it will start firmware update.

To change the update server name, press the OK button at the Update Server option; then, the on-screen keyboard appears. See § 6.3 for how to use the on-screen keyboard.

You can get the server name from the web site, http://www.i-topfield.com.

10.4 Over the air



You can get a new firmware over the air. Select the Installation > Firmware Upgrade > OTA Firmwrae Upgrade menu.

You should see a screen like the left figure. Selecting the Start option starts firmware update.

Satellite	*Astra* (19.2°E)
Frequency	12603 MHz
Symbol Rate	22000 KS/s
Polarisation	Horizontal
PID	347

On the left table is presented the transponder information appointed by the manufacturer, Topfield, for firmware update.

This transponder information can be changed. You can get the information from the web site, http://www.i-topfield.com.

Appendix A

Universal Remote Control

The universal remote control allows you to operate the most important functions such as volume control on your television, audio system, or DVD player. To be able to control the device, you must adapt the remote control to the device first.

Take the following steps:

1. Turn on the device you want to operate.
2. Point the remote contorl at the remote senser on the device.
3. Hold down the OK and device button simultaneously for two seconds until LED lamp flashes on. For example, if you want to operate your television with the remote control, press the OK and TV buttons simultaneously.
4. Find the manufacturer of the device from the codes list.
5. Enter the three-digits code you have found for your device and press the OK button.
6. If the setting is finished correctly, LED lamp blinks twice and the device will be turned off. Otherwise, repeat from the step 2.

If you cannot find a code for your device, do as follows:

1. Turn on the device you want to operate.
2. Point the remote contorl at the remote senser on the device.
3. Hold down the OK and device button simultaneously for two seconds until LED lamp flashes on. For example, if you want to operate your television with the remote control, press the OK and TV buttons simultaneously.
4. Press the CHANNEL+ or CHANNEL− button until the device turns off.

If you want to find out the number which you set for your device, do as follows:

1. Hold down the OK and device button simultaneously for two seconds. For example, if you want to know the number which you set for your television, press the OK and TV buttons simultaneously.
2. Press the *i* button. Then LED lamp will show the number with blinks. For example, if the number is 3, LED lamp will blink three times. In case of 0, LED lamp will blink ten times.

You can reset the settings. To do that, do as follows:

1. Hold down the TV and 0 buttons simultaneously for more than five seconds.
2. Each device button blinks three times in the following order: TV → STB → DVD → AUX
3. After that, all settings will be reset to the manufacturer's factory settings.

NOTE

If your device code is not listed on the following pages, you will not be able to use this remote as a universal remote for your specific device.

A.1 TV codes list

A

ACCENT	049, 063
ACEC	112
ACURA	195
ADMIRAL	065, 076, 163, 171, 190, 307, 324, 369
ADYSON	379
AGASHI	076, 379
AGEF	324
AIKO	049, 063, 076, 102, 141, 172, 195, 225, 379
AIM	049, 063
AIWA	376, 377
AKAI	019, 049, 050, 055, 063, 076, 102, 107, 123, 133, 139, 141, 150, 172, 174, 182, 195, 209, 225, 326, 333, 379, 428, 432, 433, 437
AKIBA	006, 049, 063, 123, 380
AKITO	049, 063, 106
AKURA	006, 049, 076, 096, 123, 195, 419, 426
ALARON	042, 334
ALBA	018, 044, 049, 050, 107, 123, 134, 163, 179, 184, 195, 225, 228, 232, 239, 379, 413, 421, 431
ALBIRAL	121, 326, 372
ALCYON	407
ALLORGAN	050, 094, 236, 334
ALLSTAR	049, 063
AMPLIVISION	113, 379, 421, 425
AMSTRAD	004, 011, 049, 063, 076, 123, 131, 172, 195, 225, 426
ANAM	049, 063, 195
ANGLO	076, 195
ANITECH	049, 063, 076, 195, 407
ANSONIC	045, 049, 063, 107, 112, 195, 210, 242, 391, 413, 421
APOLLO	165
ARC EN CIEL	029, 034, 074, 182, 186, 415, 424
ARCAM	029, 379, 424
ARDEM	392
ARISTONA	049, 050, 063, 065, 079, 112, 158, 160, 188
A.R.SYSTEM	049, 063
ARTHUR MARTIN	075, 107, 127, 133, 136, 139, 148, 153, 307, 425
ASA	003, 020, 065, 078, 080, 091, 117, 146, 171, 197, 235, 307, 319, 324, 341, 375, 406, 408
ASBERG	049, 063, 407
ASORA	195
ASTRA	195
ASUKA	006, 050, 076, 123, 379
ATLANTIC	049, 050, 063, 113, 236, 242, 379
ATORI	195
AUCHAN	107, 425

AUDIOSONIC	031, 049, 063, 074, 076, 195, 213, 379, 392, 421
AUDIOTON	050, 076, 379, 392, 421
AUSIND	075, 090, 407
AUTOVOX	050, 071, 078, 079, 080, 083, 090, 147, 156, 236, 254, 305, 319, 323, 324, 379, 407, 413, 416
AWA	018, 049, 063, 131, 195, 206, 320, 379, 426, 433
AYOMI	411

B

BAIRD	074, 102, 182, 209, 321, 329, 379, 409
BANG & OLUFSEN	324
BARCO	107, 355, 371, 372, 422
BASIC LINE	006, 031, 049, 107, 123, 159, 195, 207, 226
BASTIDE	379
BAUR	012, 049, 053, 063, 107, 150, 172, 244, 245, 246, 247, 301, 357, 414, 416
BAZIN	379
BEKO	063, 184, 240, 241, 392, 421, 433
BEON	049, 063, 163
BEST	213, 421
BESTAR	049, 063, 421
BINATONE	379
BLACK STAR	413
BLACKTRON	006
BLACKWAY	006
BLAUPUNKT	019, 053, 057, 060, 113, 118, 244, 245, 246, 247, 248, 249, 308
BLUE SKY	006, 049, 063, 123, 195, 232
BLUE STAR	006
BONDSTEC	413
BOOTS	050, 106, 379
BPL	006, 049, 063
BRANDT	074, 182, 218, 415, 424, 436
BRANDT ELECTRONIQUE	029, 034, 074, 182, 186
BRINKMANN	049, 063, 163
BRION VEGA	049, 063, 065, 083, 167, 172, 173, 181, 196, 324, 356
BRITANNIA	379
BROTHER	076
BRUNS	056, 065, 324
BSR	094, 107, 110, 139, 168, 314
BTC	123
BUSH	006, 018, 049, 076, 094, 106, 107, 123, 134, 139, 142, 143, 172, 179, 195, 209, 223, 225, 226, 232, 239, 307, 379, 416
BUSH(UK)	107, 147, 168

C

CAPSONIC	076
CARAD	049, 063
CARENA	049, 063, 380
CARREFOUR	018, 406
CARVER	177

CASCADE 049, 063, 064, 195
CASIO 049, 063
CATHAY 049, 063
CCE 049, 063, 379
CENTURION 049, 063
CENTURY 044, 054, 065, 163, 189, 324, 411, 413
CGE 002, 044, 054, 090, 093, 094, 096, 107, 139, 142, 163, 168, 189, 369, 407, 413, 421
CIHAN 111
CIMLINE 031, 123, 134, 195
CITY 195
CLARIVOX 056, 121, 125, 163, 406
CLATONIC 076, 123
CLATRONIC 031, 045, 049, 063, 076, 113, 123, 195, 225, 379, 407, 413, 421, 431
CMS HIGHTEC 379
COMTEL 111, 125
CONCORDE 195
CONDOR 006, 045, 049, 050, 063, 113, 163, 195, 210, 379, 413, 421
CONTEC 018, 131, 195, 206, 302, 320, 379
CONTINENTAL EDISON 029, 034, 074, 182, 186, 232, 415, 424
COSMEL 195, 213
CROSELY 044
CROSLEY 054, 065, 090, 093, 094, 104, 107, 139, 324, 407, 413
CROWN 049, 063, 154, 163, 170, 195, 209, 232, 372, 407, 419, 421, 431
CS ELECTRONICS 031, 123, 379, 413
CTC 413
CTC CLATRONIC 045
CURTIS MATHES 126, 190, 212
CYBERTRON 123

D

DAENYK 042
DAEWOO 063, 123, 140, 145, 161, 193, 195, 379
DAINICHI 123, 379
DANSAI 063, 076, 141, 195, 379
DANSETTE 426
DANTAX 392, 421
DATSURA 209
DAWA 049, 063
DAYTRON 049, 063, 195, 226
DE GRAAF 023, 107, 122, 139, 209, 307
DECCA 049, 063, 102, 106, 111, 120, 200, 331, 379
DECCA(UK) 046, 050, 102, 106, 131
DEITRON 049, 063
DENKO 076
DENON 126, 212
DER 321
DERWENT 105
DESMET 049, 063, 113
DIAMANT 049, 063
DIGILINE 049, 063
DIXI 063, 195, 379, 413
DOMLAND 423

DORIC 104, 105

DREAN 049, 063

DTS 195

DUAL 049, 050, 063, 095, 107, 139, 156, 168, 182, 242, 243, 379, 414, 416, 423, 424

DUAL-TEC 195, 168, 050, 040

DUMONT 045, 065, 080, 102, 139, 146, 319, 324, 339, 341, 375, 379, 406, 408

DUMONT-FINLUX 020, 045, 061, 075, 078, 091, 104, 117, 147

DUX 049, 063, 112

DYNATRON 049, 063

E

ELBE 049, 063, 107, 121, 123, 172, 194, 210, 242, 337, 368, 369, 391, 411, 421, 435

ELBIT 111

ELCIT 045, 046, 047, 062, 065, 104, 107, 150, 168, 324, 413

ELECTA 006, 076

ELECTRO TECH 195

ELEKTA 006, 076

ELEKTRONSKA 318

ELG 049, 063

ELIN 003, 020, 049, 063, 107, 139, 172, 195, 379, 408, 416

ELITE 031, 049, 063, 123

ELMAN 045, 168

ELTA 076, 195, 379

EMERSON 004, 006, 042, 044, 049, 063, 065, 113, 225, 324, 327, 406, 413

EMPEROR 006

ERRES 063, 112

ESC 049, 063

ETRON 049, 063, 107, 139, 195

EURO-FEEL 076

EUROMANN 049, 063, 076, 379, 421

EUROPA 049, 063

EUROPHON 044, 045, 046, 049, 050, 063, 068, 107, 120, 168, 318, 336, 379, 413

EXPERT 107, 236, 242, 425

EXQUISIT 049, 063, 413

F

FAMILLY LIFE 049, 063

FENNER 063, 195

FERGUSON 001, 032, 050, 073, 074, 076, 080, 082, 102, 103, 121, 158, 182, 204, 218, 244, 245, 246, 251, 306, 319, 321, 322, 328, 329, 344, 409, 411, 436

FIDELITY 049, 050, 063, 076, 107, 158, 225, 307, 364, 379

FIDELITY(UK) 133

FILSAI 050, 379

FINHER 359

FINLANDIA 033, 122, 139, 172, 197, 209, 223, 307, 375, 419

FINLUX 003, 020, 042, 045, 049, 061, 063, 075, 078, 080, 090, 091, 102, 104, 107, 117, 139, 146, 147, 163, 197, 210, 235, 319, 324, 339, 341, 375, 379, 406, 407, 408, 428, 429, 437

FIRST LINE 045, 049, 063, 094, 102, 107, 134, 139, 191, 195, 209, 210, 379, 411, 413, 416

FISHER 018, 041, 050, 056, 065, 069, 102, 104, 107, 117, 139, 143, 156, 172, 189, 206, 209, 320, 324, 379, 408, 414, 416, 421

FLINT 031, 049, 063, 102, 123, 379, 380

FNR 045

FORGESTONE 158

FORMENTI 090, 107, 113, 139, 307, 324, 379, 407

FORMENTI-PHOENIX 050, 075, 104, 113, 148, 307

FORTRESS 190, 324

FRABA 049, 063, 421

FRIAC 045, 049, 063, 195

FRONTECH 076, 139, 195, 307, 379, 413, 416

FUJITSU 042, 045, 102, 107, 195, 236, 327, 379

FUJITSU GENERAL 195, 379

FUNAI 042, 076, 094, 314, 327

G

GALAXI 045, 049, 063

GALAXIS 045, 049, 063, 163, 421

GBC 031, 104, 107, 139, 143, 168, 195

GE 006, 074, 182, 218

GEANT CASINO 107, 425

GEC 049, 063, 102, 104, 107, 120, 171, 172, 192, 307, 379, 416

GEC(UK) 046, 050, 102, 107, 150, 162, 192

GELOSO 031, 047, 062, 104, 107, 139, 168, 171, 195, 307, 413

GENERAL 064, 074, 182

GENERAL TECHNIC 195

GENEXXA 049, 063, 123, 307, 426

GOLDHAND 379

GOLDLINE 213

GOODMANS 018, 042, 063, 076, 102, 134, 139, 141, 143, 155, 182, 195, 218, 225, 232, 379, 428

GORENJE 124, 189, 421

GPM 123

GRADIENTE 049, 063, 170, 177

GRAETZ 049, 063, 090, 104, 136, 139, 153, 159, 162, 171, 172, 198, 225, 307

GRANADA 013, 018, 033, 041, 063, 102, 104, 105, 112, 120, 148, 164, 165, 171, 209, 218, 237, 238, 240, 241, 252, 307, 325, 363, 379, 407, 418, 419

GRANADA(UK) 046, 050, 090, 107, 139, 143, 162, 307

GRANDIN	006, 031, 049, 063, 107, 113, 123, 195, 379, 380, 425, 431, 435
GRONIC	045
GRUNDIG	005, 019, 049, 053, 063, 080, 090, 101, 115, 118, 166, 232, 244, 245, 246, 247, 248, 249, 308, 340, 341, 406, 407

H

HALIFAX	076, 379
HAMPTON	379
HANIMEX	094
HANSEATIC	006, 018, 049, 050, 063, 094, 104, 107, 113, 143, 172, 195, 324, 379, 391, 416, 421, 423
HANTAREX	045, 046, 049, 063, 195
HANTOR	049, 063
HARLEY DAVIDSON	042
HARWOOD	049, 063, 195, 426
HAUPPAUGE	049, 063
HCM	006, 031, 049, 063, 076, 123, 163, 195, 379, 426
HEMA	195, 379
HEMMERMANN	150, 416
HIFIVOX	029, 034, 074, 182, 186, 304, 424
HIGASHI	050
HIGHLINE	049, 063, 076
HIKONA	123
HINARI	004, 018, 042, 049, 066, 094, 107, 119, 123, 133, 134, 139, 143, 179, 195, 209, 232, 307, 327
HISAWA	006, 031, 123, 380, 425
HIT	342
HITACHI	007, 009, 018, 020, 023, 033, 049, 050, 063, 074, 086, 102, 104, 107, 110, 126, 127, 139, 143, 150, 162, 168, 171, 176, 182, 185, 186, 192, 212, 218, 231, 304, 307, 309, 315, 333, 334, 344, 361, 379, 416, 418
HITASHI FUJIAN	013, 164, 252
HITSU	123, 195, 379
HORNYPHON	049, 063, 112
HOSHAI	123, 379
HUANYU	379
HYGASHI	379
HYPER	050, 168, 195, 254, 361, 379, 413
HYPERSONIC	172
HYPSON	006, 049, 063, 076, 379, 380, 411, 425

I

IBERRIA	049, 063
ICE	049, 063, 076, 123, 195, 225, 379
ICES	123, 379
IMPERIAL	002, 044, 049, 054, 063, 090, 093, 094, 107, 142, 163, 168, 189, 301, 307, 369, 407, 413, 416, 421
INDIANA	049, 063

INGELEN 090, 104, 136, 139, 153, 159, 162, 171, 198, 232, 435

INGERSOL 195

INNO HIT 044, 046, 049, 050, 063, 066, 102, 123, 155, 195, 217, 379, 407, 413

INNOVATION 049, 063

INTERACTIVE 210

INTERBUY 076, 195, 413

INTERFUNK 049, 063, 065, 067, 074, 090, 104, 107, 112, 139, 150, 153, 159, 172, 182, 301, 302, 324, 363, 421

INTERVISION 006, 045, 049, 055, 063, 076, 107, 123, 225, 232, 378, 379, 380, 381, 382, 384, 385, 386, 387, 388, 389, 413, 421, 423

IRRADIO 031, 049, 063, 066, 075, 090, 123, 155, 195, 254, 407, 413

ISUKAI 006, 049, 063, 123

ITC 379

ITS 006, 031, 049, 063, 076, 123, 225, 379

ITT 042, 090, 107, 117, 134, 139, 150, 157, 159, 162, 165, 171, 172, 193, 197, 198, 209, 301, 307, 343, 350, 375, 416, 428

ITT-NOKIA 042, 090, 097, 104, 107, 117, 134, 136, 139, 150, 153, 159, 162, 165, 171, 172, 185, 193, 197, 198, 209, 301, 307, 343, 350, 375, 416, 428, 433, 435, 437

ITV 049, 063, 076, 413

J

JEAN 018

JEC 141

JET POINT 365

JVC 018, 103, 123, 129, 143, 158, 170, 174, 182, 225, 364, 409, 433

K

KAISUI 006, 031, 049, 050, 063, 123, 195, 207, 379, 380

KAMOSONIC 050

KAMP 379

KAPSCH 107, 172, 236, 242, 408

KARCHER 003, 006, 020, 031, 045, 049, 050, 063, 068, 076, 107, 195, 207, 217, 421, 435

KATHREIN 124

KAWASHO 379

KB ARISTOCRAT 107

KENDO 044, 045, 049, 055, 063, 134, 172, 210, 413, 421, 435

KENNEDY 071, 079, 104, 107, 139, 236, 305, 323, 369

KINGSLEY 379

KLARMAX 371, 372

KNEISSEL 049, 063, 210, 242, 369, 391, 411, 421, 435

KOLSTER 045, 049, 063, 416

KONKA	031, 049, 063, 123, 225, 232
KORPEL	049, 063
KORTING	027, 065, 094, 113, 324, 421
KOSMOS	049, 063
KOTRON	076, 426
KRAKING	411
KRIESLER	050, 063, 065, 079, 112, 158, 160, 188
KTV	050, 379
KYOSHU	076, 163
KYOTO	107
KYUSHU	426

L

LECSON	049, 063
LEMAIR	210
LENCO	049, 063, 107, 195, 408
LENOIR	050, 195
LESA	413
LEYCO	049, 063, 076, 094, 102, 431
LEYEO	076
LG(GOLDSTAR)	023, 049, 050, 055, 063, 107, 139, 152, 155, 168, 172, 195, 202, 203, 219, 254, 379, 413, 421
LIESENKOTTER	049, 063, 112
LIFETEC	049, 063, 076, 123, 195
LLOYD'S	195
LOEWE	049, 063, 089, 324, 391, 421
LOEWE OPTA	035, 046, 049, 052, 063, 065, 120, 144, 213, 324
LOGIC	331
LOGIK	032, 131, 158, 225, 364
LOGIX	195
LUMA	063, 107, 110, 133, 171, 172, 195, 210, 236, 242, 307
LUMATRON	049, 063, 076, 107, 172, 236, 242, 329, 379
LUX MAY	049, 063, 195
LUXOR	042, 050, 090, 107, 122, 127, 133, 139, 150, 155, 159, 165, 172, 185, 197, 209, 307, 312, 330, 416, 418, 428, 429
LYCO	076

M

M ELECTRONIC	003, 235, 375
MAAZ	371, 372
MADISON	049, 063
MAGNADYNE	045, 046, 047, 062, 065, 104, 107, 120, 139, 150, 168, 318, 324, 413
MAGNAFON	045, 046, 050, 068, 075, 090, 120, 235, 336, 379, 407
MAGNAVOX	018, 042, 049, 063
MANDOR	076
MANESTH	063, 076, 094, 113, 134, 141, 379
MANHATTAN	049, 063, 195
MARANTZ	063
MARELLI	324
MARK	063, 195, 379

MASUDA 123, 195, 225

MATSUI 001, 004, 018, 041, 049, 050, 063, 094, 100, 102, 106, 107, 131, 134, 141, 143, 150, 171, 179, 180, 195, 209, 218, 225, 229, 232, 244, 245, 246, 307, 314, 331, 379, 380, 416, 431

MAXIMAL 119, 139

MAXWELL 371, 372

McMICHAEL 192

MEDIATOR 049, 063, 112

MEDION 049, 063, 195

MEGAS 435

MEGATRON 126, 212

MELECTRONIC 003, 049, 063, 074, 182, 195, 210, 375, 379, 408, 413, 416, 428, 429

MELVOX 425,

MEMOREX 099, 195

MEMPHIS 102, 195, 213

MERCURY 049, 063, 195

METZ 019, 049, 051, 053, 065, 067, 070, 092, 118, 244, 245, 246, 247, 324, 412

MICROMAXX 049, 063, 195

MINERVA 019, 053, 080, 090, 118, 232, 244, 245, 246, 247, 248, 249, 340, 341, 406, 407

MINOKA 049, 063, 419, 426

MISTRAL 158

MITSUBISHI 013, 018, 019, 021, 049, 063, 065, 105, 124, 131, 132, 143, 157, 164, 183, 190, 244, 245, 246, 252, 326, 330, 331

MIVAR 043, 046, 050, 058, 072, 081, 090, 120, 155, 318, 337, 379, 391, 407, 421, 434

MONACO 195

MORGAN'S 049, 063

MOTION 407

MOTOROLA 190

MTC 049, 063, 379, 416, 421

MTEC 106

MULTISTANDARD 045

MULTITEC 049, 063, 195

MULTITECH 031, 045, 046, 049, 050, 063, 120, 189, 195, 379, 392, 413, 416, 421

MURPHY 102, 104, 105, 107, 117, 171, 254, 307, 379, 408

MURPHY(UK) 162

MUSIKLAND 123

N

NAD 172, 209

NAIKO 049, 063

NAKIMURA 049, 063

NAONIS 036, 040, 071, 079, 110, 171

NAT 085, 149, 151

NATIONAL 033, 085, 104

NEC 018, 049, 063, 113, 131, 143, 177, 195, 379, 380

NECKERMANN	002, 012, 049, 050, 063, 065, 107, 133, 139, 163, 180, 189, 210, 247, 250, 307, 312, 324, 357, 379, 413, 416, 421
NEDIATOR	063
NEI	063, 125, 225
NESCO	042, 413
NETSAT	049, 063
NETWORK	213
NEUFUNK	049, 063, 195, 435
NEW WORLD	123
NEWTECH	049, 050, 063, 182, 195, 379
NICAMAGIC	379
NIKKAI	018, 049, 063, 076, 102, 123, 139, 141, 195, 213, 379
NIKKIA	066
NOBLEX	049, 063, 076, 359, 360
NOBLIKO	044, 045, 050, 075, 080, 090, 235, 379, 406, 407
NOGAMATIC	029, 034, 074, 182, 186, 424
NOKIA	090, 104, 107, 117, 134, 136, 139, 150, 153, 157, 159, 162, 165, 171, 172, 193, 197, 198, 209, 301, 307, 330, 343, 350, 416, 419, 428, 429, 433, 437
NORDMENDE	017, 029, 034, 038, 049, 063, 074, 083, 130, 150, 165, 174, 182, 186, 218, 244, 245, 246, 304, 307, 333, 334, 424
NOVATRONIC	003, 020, 049, 063

O

OCEANIC	086, 094, 104, 107, 108, 109, 116, 139, 159, 172, 209, 425
OCEANIC(F)	150
ODEON	076
OKANO	049, 063, 076, 102, 421
OMEGA	076
ONCEAS	050
ONWA	031, 123, 225, 432
OPERA	049, 063
OPTIMUS	099, 315
OPTONICA	190
ORBIT	049, 063
ORION	004, 042, 045, 049, 051, 063, 076, 094, 113, 131, 134, 139, 150, 179, 191, 195, 199, 216, 314, 331, 366, 367, 426
ORLINE	049, 063, 123
ORMENTI-PHOENIX	104
ORMOND	195
OSAKA	066
OSAKI	049, 063, 066, 076, 102, 106, 123, 379, 426
OSIO	049, 063, 155
OSO	123
OSUME	018, 102, 123, 302
OTTO VERSAND	012, 018, 049, 050, 053, 063, 074, 094, 104, 107, 113, 134, 139, 143, 172, 190, 244, 245, 246, 247, 250, 312, 357, 362, 379, 413, 414, 416

P

P.T ACTRON 111

PAEL 050, 075, 379

PALLADIUM 012, 049, 063, 107, 163, 210, 247, 324, 357, 379, 413, 416, 421

PALSONIC 049, 055, 063, 076, 379, 426

PANAMA 049, 063, 076, 195, 379, 413

PANASONIC 049, 063, 099, 104, 107, 137, 139, 149, 151, 172, 397, 398, 400, 401, 405

PANAVISION 049, 063, 210

PATHE CINEMA 107, 113, 121, 379, 391, 411, 416, 425

PATHE CINEMA(F) 050, 168

PATHE MARCONI 029, 034, 074, 182, 186, 415, 424

PAUSA 195

PAUZA 195

PERDIO 049, 063, 102, 107, 113

PERFEKT 049, 063

PERSHIN 425

PHILCO 002, 016, 044, 049, 054, 063, 065, 090, 093, 094, 104, 107, 126, 142, 163, 168, 189, 212, 324, 369, 407, 413, 421

PHILHARMONIC 379

PHILIPS 015, 022, 049, 050, 063, 065, 079, 089, 111, 112, 157, 158, 160, 175, 182, 188, 192, 215, 217, 220, 221, 247, 250, 313, 324, 337, 342, 350, 363, 374, 427

PHOENIX 049, 050, 063, 075, 102, 104, 107, 113, 148, 324, 379, 392, 421

PHONOLA 022, 050, 063, 065, 079, 112, 158, 160, 188, 250, 324, 379

PILOT 049, 063

PIONEER 049, 063, 074, 172, 182, 209, 218, 227, 307, 421, 427

PIONIER 392, 421

PLANTRON 049, 063, 076, 195

PLAYSONIC 379

POLICOM 074

POPPY 195

POWERPOINT 232

PRANDONI-PRINCE 044, 046, 075, 090, 120, 171, 172, 307, 407, 413

PRECISION 379

PREMIER 142

PRIMA 076, 195, 307

PRINCE 044, 046, 075, 171

PRINZ 102, 185, 416

PROFEX 107, 139, 195

PROFI-TRONIC 045, 049, 063

PROLINE 030, 049, 102, 112, 191, 366, 436

PROSONIC 049, 063, 085, 149, 151, 195, 225, 379, 421, 431

PROTECH 045, 063, 076, 139, 163, 195, 379, 413, 416

PROVISION 049, 063

PYE	050, 063, 065, 079, 112, 157, 158, 160, 188, 250
PYMI	049, 063, 112, 195, 324

Q

QUADRA VISION	425
QUASAR	045, 046, 068, 075, 099, 155, 413
QUELLE	003, 018, 019, 020, 049, 050, 053, 063, 074, 075, 076, 078, 080, 090, 091, 094, 113, 115, 117, 118, 131, 139, 146, 147, 150, 153, 155, 172, 195, 206, 235, 244, 245, 246, 247, 254, 301, 319, 320, 340, 341, 379, 406, 408, 413, 416
QUESTA	018

R

RADIALVA	049, 063, 074, 107, 123
RADIOLA	050, 063, 065, 079, 112, 158, 160, 188, 250, 342
RADIOMARELLI	045, 046, 047, 062, 063, 065, 104, 105, 150, 168, 324, 413
RADIONETTE	003, 020, 117, 150
RADIO SHACK	049, 063
RADIOTONE	049, 063, 076, 163, 195, 421, 426, 431
RAMK	341
RANDT	029
RANK	147, 406
RBM	341
RBM(UK)	147
RCA	190, 218, 436
RECOR	049, 063
RECTILIGNE	049, 063
REDIFFUSION	018, 059, 105, 139, 171, 172, 307, 343
REDIFFUSION(UK)	150, 162
REDIFUSION	104, 105
REDSTAR	049, 063
REFLEX	049, 063
REVOX	049, 063, 421
REX	036, 040, 063, 071, 079, 095, 107, 110, 171, 210, 236, 242, 243, 305, 307, 323, 338, 413
RFT	076, 102, 390, 391, 392, 393, 394, 395, 421
R-LINE	049, 063
ROADSTAR	031, 049, 063, 076, 163, 195
ROBOTRON	056, 065, 324
RODEX	049, 063
ROTEL	302
ROWSONIC	050
ROYAL LUX	421, 426
RTF	056, 065

S

SABA	014, 017, 029, 034, 038, 046, 065, 074, 077, 107, 120, 133, 139, 172, 182, 186, 218, 304, 307, 324, 333, 334, 424, 436
SACCS	121
SAGEM	006, 380, 435

SAISHO 004, 050, 076, 084, 107, 131, 132, 134, 179, 195, 233, 307, 330, 331, 379

SALORA 033, 075, 107, 127, 133, 136, 139, 148, 150, 153, 171, 172, 185, 198, 209, 301, 307, 312, 416, 418, 419

SAMBERS 045, 046, 068, 075, 090, 120, 155, 336, 407

SAMSUNG 050, 063, 066, 076, 102, 155, 189, 195, 217, 359, 360, 365, 379, 421

SANDRA 379

SANELA 411

SANSUI 049, 063, 225

SANTON 195

SANYO 003, 018, 020, 041, 049, 050, 056, 063, 065, 102, 107, 117, 131, 143, 189, 195, 198, 201, 206, 209, 302, 320, 325, 331, 351, 379, 391, 408, 421

SAVE 049, 063

SBR 063, 112, 157, 158, 192, 313

SCHAUB LORENZ 090, 104, 136, 139, 153, 159, 162, 171, 198, 307, 416, 433

SCHNEIDER 031, 040, 050, 063, 065, 069, 079, 095, 104, 107, 112, 114, 139, 148, 156, 158, 160, 168, 172, 182, 188, 195, 225, 242, 243, 250, 307, 328, 342, 379, 413, 414, 416, 423

SCOTT 042, 327

SEARS 042

SEG 018, 045, 049, 050, 056, 063, 076, 107, 172, 195, 232, 379, 413

SEI 004, 045, 049, 051, 063, 094, 107, 139, 236, 314, 324, 357, 416

SEL SINUDYNE 250

SELECO 036, 040, 063, 071, 079, 095, 107, 110, 171, 172, 210, 236, 242, 243, 305, 307, 323, 338, 339, 369

SENCORA 195

SENTRA 123, 139, 141, 195

SERINO 380, 435

SHARP 018, 094, 143, 170, 190, 206, 214, 302, 362, 364

SHORAI 042, 094

SIAM 049, 063

SIAREM 045, 046, 065, 104, 107, 120, 139, 324

SICATEL 121

SIEMENS 003, 018, 019, 023, 049, 053, 063, 066, 113, 118, 206, 244, 245, 246, 247, 248, 249, 302, 307

SIERA 050, 063, 065, 079, 112, 158, 160, 188

SIERRA 049, 063, 112

SIESTA 421

SILVA 049, 063, 379

SILVER	018, 042, 049, 063, 076, 172
SINGER	045, 047, 049, 063, 065, 104, 195, 324, 369, 413, 425
SINUDYNE	004, 031, 045, 051, 063, 065, 094, 104, 107, 134, 139, 150, 172, 210, 216, 236, 314, 324, 357, 366, 367, 416
SKANTIC	307, 418
SKY	049, 063
SOGERA	113
SOLAVOX	066, 102, 107, 123, 139, 172, 307
SONITRON	209, 379, 421
SONNECLAIR	049, 063
SONOKO	006, 050, 063, 076, 195, 379
SONOLOR	012, 107, 139, 159, 172, 209, 357, 425
SONTEC	049, 063, 094, 421
SONY	012, 018, 028, 045, 131, 143, 204, 208, 211, 331, 357, 358, 370
SOUND & VISION	031, 045, 123
SOUND WAVE	049, 113, 163
SOUNDESIGN	042
SPECTRA	195
SSANGYONG	195
STANDARD	049, 050, 063, 113, 123, 195, 379
STARLIGHT	049, 063, 076, 107, 195
STENWAY	006, 031, 123
STERN	036, 040, 063, 071, 079, 095, 107, 110, 171, 236, 242, 243, 305, 307, 323, 338
STRATO	049, 063, 076, 195
SUNKAI	049, 063, 094, 123, 134, 179, 191, 232, 314, 367
SUNSTAR	049, 063, 195, 225, 431
SUNWOOD	049, 063, 195
SUPERLA	379
SUPERTECH	049, 063, 123, 195, 379
SUPRA	195
SUSMU	218
SUTRON	195
SWISSLINE	413
SYDNEY	379
SYTONG	425

T

TACTUS	106
TANDBERG	065, 074, 078, 172, 182, 210, 213, 304
TANDY	050, 096, 102, 123, 190, 307, 379, 413
TASHIKO	018, 050, 107, 143, 177, 192, 201, 379, 419
TATUNG	049, 050, 063, 102, 106, 111, 120, 131, 200, 253, 331, 379
TEAC	049, 063, 076, 195, 380, 416, 426
TEC	040, 050, 064, 168, 195, 213, 218, 242, 243, 379, 413
TECH LINE	049, 063, 195
TECHICA	123
TECHNEMA	113

TECHNICS 099, 315

TEDELEX 379

TEIRON 195

TEKNIKA 042, 327

TELEAVIA 029, 034, 074, 182, 186, 415, 424

TELECOR 049, 063, 107, 123, 242, 379, 423

TELEFUNKEN 032, 049, 063, 064, 074, 082, 182, 186, 187, 218, 392, 424, 436

TELEFUSION 049, 063

TELEGAZI 049, 063, 076, 107, 123, 242

TELEMEISTER 049, 063, 113

TELESONIC 049, 063

TELESTAR 049, 063

TELETECH 049, 063, 195, 213, 413

TELETON 018, 067, 107, 236, 242, 379, 416

TELEVIDEON 050, 075, 104, 107, 113, 148, 379

TELEVISO 425

TEMCO 094

TEMPEST 049, 063, 195

TENNESSEE 049, 063

TENSAI 003, 020, 050, 055, 063, 094, 113, 117, 123, 195, 225, 379, 408, 413

TETUNG 046

TEVION 049, 063, 195

TEXET 050, 195, 379

THOMSON 008, 010, 017, 024, 029, 034, 049, 063, 064, 074, 134, 147, 174, 182, 186, 218, 230, 234, 304, 309, 333, 334, 415, 424, 436

THORN 049, 053, 063, 103, 106, 141, 158, 218, 222, 321, 329, 408, 409, 411, 419

THORN-FERGUSON 032, 073, 074, 076, 080, 082, 103, 121, 158, 306, 319, 321, 322, 328, 329, 357, 358, 364, 375

THRON 117

TMK 143

TOKAI 049, 063, 102, 107, 195, 213, 379

TOKYO 141, 379

TOMASHI 006, 031, 123

TOSHIBA 001, 018, 045, 128, 141, 143, 147, 205, 341, 369, 379, 406

TOWADA 045, 379, 416

TOYODA 195

TRAKTON 076

TRANS CONTINENS 044, 046, 049, 063, 075, 171, 307, 379

TRANSONIC 049, 063, 380

TRANSTEC 379

TRIDENT 379

TRISTAR 123, 364

TRIUMPH 004, 046, 049, 063, 128, 147, 197, 235, 339, 375

U

UHER	049, 063, 069, 080, 090, 113, 147, 148, 163, 236, 242, 307, 392, 407, 414, 421
ULTRAVOX	044, 045, 047, 049, 050, 063, 065, 104, 107, 133, 139, 324, 379, 413
UMA	305
UNIC LINE	049, 063, 165
UNITED	049, 063
UNIVERSUM	003, 004, 012, 018, 020, 049, 063, 074, 076, 094, 107, 131, 155, 163, 165, 172, 195, 202, 206, 210, 213, 235, 244, 245, 246, 320, 357, 375, 379, 406, 407, 408, 413, 416, 421, 428, 429, 437
UNIVOX	049, 063, 107, 121, 213, 324, 409, 411
UTAX	050

V

VEGAVOX	163
VESTEL	049, 063, 107, 125, 364, 379
VEXA	063, 195
VICTOR	174
VIDEO SYSTEM	049, 063
VIDEOLOGIQUE	031, 123, 379
VIDEO SYSTEM	049, 063
VIDEOTECHNIC	113, 379
VIDEOTON	107, 418
VIDIKRON	045
VIDTECH	018
VIPER	213
VISIOLA	379
VISION	049, 063, 113
VISTAR	172, 236
VOLTEC	074
VORTEC	063
VOXSON	049, 063, 065, 090, 163, 171, 307, 324, 407

W

WALTHAM	049, 063, 163, 182, 307, 379, 418
WATSON	049, 063, 107, 113, 123, 195, 244, 245, 246, 423, 431
WATT RADIO	045, 050, 068, 104, 107, 121, 139, 150, 336, 379, 416
WEGA	018, 049, 063, 139, 143, 324
WEGA COLOR	065, 088
WEGAVOX	195
WELTBLICK	063, 113
WESTINGHOUSE	063, 094
WESTON	168
WHARFEDALE	049, 063
WHITE	045
WHITE WESTINGHOUSE	049, 050, 063, 113, 213, 379
WINCO	426
WINDSTAR	006
WINTERNITZ	361

X

XRYPTON	049, 063

Y

YAMISHI 006, 049, 063, 123, 379, 380
YOKAN 049, 063
YOKO 049, 050, 063, 076, 123, 195, 379, 413, 421
YORX 123

Z

ZANUSSI 036, 040, 063, 071, 079, 095, 110, 171, 236, 305, 307, 323, 338, 379
ZOPPAS 036, 040, 071, 079, 110, 171, 307

A.2 DVD codes list

3

3 DLAB	072

A

AIWA	075
ALBA	087
AMSTRAD	085
A-TREND	086

B

BLUE SKY	080
BUSH	078, 079, 082, 085

C

CINE ULTRA	082
CYBER HOME	086

D

DAEWOO	083
DENON	002, 019, 022, 034, 051
DENVER	082
DENZEL	077
DIGITOR	079
DIVIDO	083
DUAL	076, 077

E

ELTA	079
ENZER	077

G

GE	003, 004
GRUNDIG	072, 080

H

HARMAN KARDON	001, 066
HITACHI	077

J

JMB	080
JVC	006

K

KENWOOD	007, 034, 043, 050, 069
KISS	077

L

LAWSON	083
LECSON	081
LENCO	082
LG(GOLDSTAR)	005, 055, 064, 070
LIFETEC	076
LOGIX	083

M

MAGNAVOX	009, 033, 056
MANHATTAN	083
MARANTZ	033, 059, 072
MATSUI	076, 080
MEDION	076, 083
MICROMEDIA	009
MICROMEGA	072
MINOWA	083
MITSUBISHI	023, 036
MONYKA	077

N

NAD	010, 062
NEUFUNK	077

O

ONKYO	009, 015, 048
OPTIMUS	050
ORION	080
ORITRON	076

P

PANASONIC	024, 025, 030, 034, 035, 044, 052
PHILIPS	009, 033, 056, 072
PHONOTREND	082
PIONEER	010, 012, 020, 038, 041, 046, 065, 071, 074
PROLINE	076
PROSCAN	003, 004, 037
PROVISION	082

R

RAITE	077
RCA	003, 004, 018, 037
REC	034, 078
REVOY	082
ROADSTAR	078, 079, 082

S

SANSUI	080
SCAN	083
SCHNEIDER	076
SEG	077, 085
SHARP	021, 028, 050
SHINCO	087
SM ELECTRONIC	079
SONY	015, 029, 043, 045, 067
STANDARD	076

T

TEAC	087
TECHNICS	034
TENSAI	076, 079
TEVION	076
THOMSON	003, 004, 073
TOKAI	077
TOKIWA	083
TOSHIBA	009, 010, 033, 057, 058
TV PROJECT	008

U

UNIVERSUM	085

W

WALKVISION	087
WESDER	082
WHARFEDALE	081

Y

YAMAHA	016, 017, 030, 034, 063
YAMAKAWA	077, 084

Z

ZENITH	005, 009, 033, 055, 064, 083

A.3 Audio system codes list

A

ADCOM	082, 092, 225, 161, 023, 148, 149
AIWA	170, 018, 104, 202, 203, 213, 211, 188
AKAI	189
ANTHEM	127, 128
ARCAM	141, 255
ATLANTIC_TECHNOLOGY	134
AUDIO_FILE	071

B

B&K	096, 097
BOSE	070, 170, 224, 147, 227, 199
BOSTON_ACOUSTICS	246

C

CARVER	006, 028, 061, 071, 201, 214, 226, 185, 022, 077, 050
CLARION	026

D

DELPHI	251
DENON	109, 215, 230, 234, 002, 121, 133

E

ELAN	057, 090
ESCIENT	229

F

FISHER	047, 214, 182
FLEXTRONICS	207
FOSGATE_AUDIONICS	231, 134

G

GOLDSTAR	008

H

HARMAN_KARDON	231, 233, 153, 154, 118, 119
HITACHI	020

I

INTEGRA	029

J

JVC	163, 191, 114, 034, 091

K

KENWOOD	026, 066, 145, 192, 182, 005, 037, 196, 252
KLH	123
KRELL	150, 072, 197, 222

L

LEXICON	120, 235, 236, 237, 159, 160
LINN	124, 206
LUXMAN	137, 139, 052, 165, 115, 004, 009

M

MAGNAVOX	086, 164, 152, 208
MARANTZ	006, 028, 031, 040, 063, 185, 186, 015, 056
MCINTOSH	238, 053

MERIDIAN	100, 012, 013
MITSUBISHI	242, 243, 204
MONDIAL	157, 158, 042, 043, 081, 112
MYRYAD	030, 099

N

NAD	186, 113, 038, 216, 210
NAKAMICHI	111, 244, 245, 172, 183, 054
NIRO	135
NILES	241

O

ONKYO	029, 017, 046, 108, 080, 209
OPTIMUS	026, 041
OUTLAW	134

P

PANASONIC	032, 195, 219, 177, 098, 221
PARASOUND	129, 130, 132, 003, 103, 105, 125, 126
PHILIPS	249, 250, 063
PIONEER	014, 039, 044, 069, 168, 116, 035, 078
POLKAUDIO	251
PROCEED	144, 021

R

RCA	010, 048, 117, 156, 067, 055
REALISTIC	019, 073, 075
ROTEL	074, 083, 085
RUSSOUND	223, 239

S

SAMSUNG	016
SANSUI	040, 048, 110, 065, 228, 063
SANYO	047, 059
SCOTT	019
SHARP	026, 094, 131, 175
SHERWOOD	024, 102, 106, 246
SONY	018, 247, 248, 166, 101, 184, 218, 025, 179, 180, 220
SOUNDESIGN	036
SUNFIRE	142, 143, 146

T

TEAC	005, 019, 049, 111, 212, 217
TECHNICS	122, 193, 219, 178, 177, 200, 254, 007
THETA_DIGITAL	136
TOSHIBA	060, 087, 033

Y

YAMAHA	026, 253, 169, 067, 173, 205, 011, 232, 089, 027, 051, 181

A.4 Additional codes list

MEDIA PC Controls

DELL	194, 190
GATEWAY	194, 190
HP	194, 190
SONY	194, 190
TOSHIBA	194, 190
WINBOOK	194, 190

XP Radios

DELPHI	251
KENWOOD	252
POLKAUDIO	251
SOLY	220

Index

'After next program', 66
'After this program', 66
16:9, 38
1st Audio Language, 35
1st Subtitle Language, 35
22 kHz, 23
2nd Audio Language, 35
2nd Subtitle Language, 35
4:3, 38

A/V Output, 36
Access Control, 43
Active, 48
Add to Fav, 51
Advanced..., 29
ALL, 30
Alphabetic, 51, 60, 73
Animation, 46
Astra, 106
AUDIO L, 18
AUDIO L/R, 14
AUDIO R, 18
Auto, 27

Battle Tank (Network), 93
Battle Tank (Single), 88
Battle Tank(Single), 89
Brightness in Operation Mode, 46
Brightness in Standby Mode, 47
Button, 5

C band, 22
CAM, 8
CAS Only, 40
CAS only, 30
CAS–FTA, 51, 61
Censorship, 42
Center, 38
Center extract, 39
Change PIN Code, 43
CI, 8
COAXIAL, 19
Common Interface, 8
Common Interface, 9
Connection Type, 23, 97, 98
Cover, 48
Cut, 79

Date, 69
Daylight Saving Time, 41
Default, 51, 60
Default PIP Size, 47
Delete, 51, 60
Descramble Mode, 45
Descramble Multiple Services, 9
Descramble multiple services, 58
DHCP, 97
DiSEqC, 23
DiSEqC 1.0, 24
DiSEqC 1.1, 24
DiSEqC Command Mode, 25
Display Format, 38, 39
Dolby Digital, 39
Duration, 66, 69

DVB, 1
DVB-S2 8PSK, 28, 29, 31
DVB-S2 QPSK, 28, 29, 31

Edit Favorite List, 61
Edit Service List, 59
Electronic Programme Guide, **55**
ENERGY, 92
eSATA, 14
Every Day, 68
Every Weekday, 69
Every Weekend, 68
Export System Data, 33

Factory Setting, 32
Fav–NoFav, 51, 61
FEC, 28, 29, 31
File Management, 99
File Name, 69
Flickr, 85, 86
Format Hard Disk, 80
Frequency, 25, 26, 28, 29
Front Display, 46
FTA + CAS, 30
FTA only, 30
FTA–CAS, 51, 60
FTA/Scrambled, 30
FTP Server, 100
Full, 38

Gateway, 98
GMT, 40
GMT Collection, 40
Goto, 25
Goto the position, 26

Hard of hearing, 35
HD Output, 36
HDMI, 14, 17
high definition, 36
Home Transponder, 47

Import System Data, 33
Info Box Display Time, 45
Info Box Position, 45
information box, 53
Instant Recording Duration, 44
IP Address, 98
IP Setting, 97, 98

Jump Time Interval, 45

K_u band, 22
keyboard, 63

LAN, 94
LAN, 14
Language, 34
Letter Box, 39
LNB, 22
LNB 1 IN, 13, 15, 22, 23
LNB 1 OUT, 13, 15, 16, 23
LNB 2 IN, 13, 15, 16, 23
LNB 2 OUT, 13, 15, 16
LNB Frequency, 23
LNB Power, 23
LNB Setting, 22
Local Time, 40, 41
Lock, 51, 60, 73
Locked, 73
Loop Through, 23

Main Display Scrolling, 46
Manual..., 28
Media Player, 82
MediaHighway, **47**
MediaHighway EPG, 47
Menu Language, 34
Mini A, 24
Mode, 40, 41, 68, 69
Modulation, 28, 29, 31
mono, 39
Mosaic, 48
Motor Control, 25
Motorized DiSEqC 1.2, 24
Motorized DiSEqC 1.3, 26
MOVE, 92
Move, 26, 48, 60
Movement, 25
MP3 Player, 81

multifeed, 55
My Latitude, 26
My Longitude, 26

Network Firmware Upgrade, 105
Network Search, 27, 28
NEW, 61
No block, 42
Normal, 40
normal-screen television, 38

ON/OFF, 14
Once, 46
One Time, 68
OPTICAL, 19
OSD, 45
OSD Transparency, 45
OTA Firmwrae Upgrade, 106
Other, 23
Others, 47, 48
Overlap, 48

Parental Control, 42
Passive, 48
Password, 98, 100
Photo Album, 83
picture-in-picture, 57
PID, 29
Pilot, 28, 29, 31
PIN, 42
Playback, 44
Polarization, 28, 29
port forwarding, 96
POWER, 92
Primary DNS, 98
Program Guide, 55
progress bar, 70
Provider, 51, 61

Radio, 68
radio services list, 60
Record, 68
Recorded Program, 67, 72, 74, 77
recorded programme list, 72
Recording, 43
Recording Drive, 43
Recover System Data, 33
Rename, 51, 60, 73
Reservation, 68
Reset Service List, 33

S/PDIF, 39
S/PDIF, 19
S/PDIF COAXIAL, 13
S/PDIF OPTICAL, 13
SAT Name Edit, 31
SAT/TP Edit, 31
Satellite, 40, 50, 51, 60, 68
Satellite Angle, 26
satellite list, 22
Satellite Name, 22, 23, 25–29, 31, 47
Save, 79
SCART Output, 37
Search Mode, 27–29
Searching, 27
Secondary DNS, 98
Separated, 23
Service, 68
Services Copy, 30
services list, 49
Show Provider, 51
Size, 73
Slideshow Effect, 47
Slideshow Time Interval, 47
SMATV, 27
SMATV..., 29
Sort, 60
Sorting, 51, 73
Sound Mode, 39
specifications, 12, 14
Standby Mode, 4, 48
Start, 106
Start firmware upgrade, 105
Start Search, 30
Start Time, 69
Starting Position, 44
stereo, 39
Store, 25
Store System Data, 33
Sub Display Content, 46

Subnet Mask, 98
subtitle, **54**
Symbol Rate, 28, 29
System ID, 103
System Status, 103

teletext, **54**
television services list, 60
Text Scroll, 46
Time, 40, 43, 73
Time Format, 41
time format, 41
Time Offset, 40
Time Padding of Timer Recording, 44
Time Shift Storage, 44
Time Shifting, 44, 56, 66
timer list, 68
Timer Recording Duration, 44
Total block, 42
Transponder, 25, 26, 40, 52, 61
transponder, **1**
Trick Mode Level, 45
Tuner, 51
Tuner 1, 22
Tuner 1 to Tuner 2, 30
Tuner 2, 22
Tuner 2 to Tuner 1, 30
Tuner Select, 22, 25, 26, 47, 68
TV, 13, 17, 37, 68
TV Aspect Ratio, 38
Type, 68

USALS, 25
USALS Setting, 26
USB, 14, 64, 104
USB Firmware Upgrade, 104
User, 25
User ID, 98, 100
User Info, 98, 100, 101
User Select, 40

VCR, 13, 19
VCR Scart Type, 37
VIDEO, 14, 16, 18, 37
Video Format, 36

Weather, 87
Web Server, 98
Weekly, 69
wide-screen television, 38

Y/Pb/Pr, 13
YouTube, 84, 85

*Manufactured under license from Dolby Laboratories. **"Dolby"** and the double-D symbol are trademarks of Dolby Laboratories.*

MPEG Layer-3 audio coding technology licensed from Fraunhofer IIS and Thomson.

Correct disposal of this product

This marking shown on the product or its literature indicates that it should not be disposed with other household wastes at the end of its working life. To prevent possible harm to the environment or human health from uncontrolled waste disposal, please separate this from other types of wastes and recycle it responsibly to promote the sustainable reuse of material resources.

Household users should contact either the retailer where they purchased this product or their local government office for details of where and how they can dispose this product for environmentally safe recycling.

Business users should contact their supplier and check the terms and conditions of the purchase contract. This product should not be mixed with other commercial wastes for disposal.

Topfield continues to improve the digital receiver which this guide explains. So some explanations and illustrations in this guide could be different from the actual digital receiver.

Copyright © 2009, Topfield Co., Ltd. All rights reserved.

English version

http://www.i-topfield.com

110T-C8AC2-701-0